2024
Annual Consumer Confidence Report on the Quality of
Naval Base Kitsap Bangor Drinking Water

This is an annual report on the quality of water delivered by the drinking water system at Naval Base Kitsap (NBK) Bangor. 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.

About NBK Bangor's Water System

Naval Base Kitsap Bangor is a Group A Community Water System (CWS) that provides drinking water to approximately 16,828 people. Our water system is Groundwater sourced, utilizing four wells to draw from the Sea Level Aquifer (see table). The depths of our 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 NBK Bangor boundaries is secured and limited to water supply activities. Additionally, unlike surface water sources, our aquifer is not exposed to air and is not subject to direct pollution and contamination. The aquifer is recharged by rainfall that falls on the Kitsap Peninsula and slowly percolates through the ground.

Water System Information			
PWS Name	PWS ID	PWS Type	Population
Naval Base Kitsap at Bangor	WA53**02714**	CWS	16,828

NBK Bangor Sources		
Source Number/Name	Source Type	Treatment
S01	Ground Water	Chlorine, Orthophosphate
S02	Ground Water	Chlorine, Orthophosphate
S04	Ground Water	Chlorine, Orthophosphate
S09	Ground Water	Chlorine, Orthophosphate

The water system is operated and maintained by experienced personnel licensed by the state of Washington. Treatment of the installation water currently consists of:

- Chlorination for disinfection to control microbes that could be present in the water
- Addition of orthophosphate to reduce corrosion of lead and copper in plumbing

Information from Environmental Protection Agency (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 Washington Department of Health (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 from their health care providers about drinking water. EPA/Center 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 (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.

Lead Information

Lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula-fed and breastfed), and young children. Lead in drinking water is primarily from materials and parts used in service lines and in home plumbing. Naval Base Kitsap is responsible for providing high quality drinking water and removing lead pipes but cannot control the variety of materials used in the plumbing in your home. Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time. You can help protect yourself and your family by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Using a filter, certified by an American National Standards Institute accredited certifier to reduce lead, is effective in reducing lead exposures. Follow the instructions provided with the filter to ensure the filter is used properly.

Use only cold water for drinking, cooking, and making baby formula. Boiling water does not remove lead from water. Before using tap water for drinking, cooking, or making baby formula, flush your pipes for several minutes. You can do this by running your tap, taking a shower, doing laundry or a load of dishes. If you have a lead service line or galvanized requiring replacement service line, you may need to flush your pipes for a longer period. If you are concerned about lead in your water and wish to have your water tested, contact your building manager or housing management point of contact. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at https://www.epa.gov/safewater/lead.

Lead Service Line Inventory Information

Naval Base Kitsap Bangor-completed lead service line inventories in compliance with Environmental Protection Agency Lead and Copper Rule Revisions that went into effect on Dec. 16, 2021. The results of the lead service line inventories are posted at the website below.
https://cnrnw.cnic.navy.mil/Operations-and-Management/Environmental-Stewardship-and-Compliance/Water-Quality-Information/

Unregulated Contaminants Monitoring Rule

Unregulated contaminants are those for which U.S. EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of these contaminants in drinking water and whether future regulation is warranted. In 2023 NBK Bangor participated in the fifth round of the Unregulated Contaminant Monitoring Rule (UCMR 5). We are pleased to report that there were no detections for any of the contaminants monitored for under UCMR 5. Information about these contaminants can be found at https://www.epa.gov/dwucmr/fifth-unregulated-contaminant-monitoring-rule and https://www.epa.gov/dwucmr/data-summary-fifth-unregulated-contaminant-monitoring-rule.

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Water Quality Summary

Per applicable federal and state regulations, we regularly test your drinking water both at the water sources and within the water distribution system. The water system operators use only EPA approved laboratory methods to analyze your drinking water. The licensed water system operators draw samples from the sources and designated sample sites in the distribution system. The samples are then transported to an accredited laboratory where a full spectrum of water quality analyses are performed for the following listed parameters.

Sampling Schedule	
Parameter	Frequency
Coliform Monitoring[1]	Monthly
Residual Chlorine	Daily
Total Trihalomethane (TTHM)	Quarterly[2]
Halo-Acetic Acids (HAA5)	Quarterly[2]
Nitrates	Annually
Lead and copper	3 years
Volatile Organic (VOC)	6 years
Gross Alpha	6 years
Radium 228	6 years
Complete Inorganics (IOC)[3]	9years
Herbicides	9 years
Pesticides	9 years
Asbestos	9 years

[1] Parameters in this group include total coliform.

[2] Due to consistent low levels, regulated required sampling is on a 'reduced' frequency (annually); however, sampling continues to be monitor at a standard (quarterly) frequency.

[3] Does not include Nitrate sampling, which is conducted annually.

Detected Contaminants

In order to ensure that tap water is safe to drink, EPA and WDOH prescribe regulations that limit the amount of contaminants in water provided by public water systems. The tables below list each water source and distribution system, with all of the detected drinking water contaminants.
Although we tested for many more contaminants than are shown here, only those substances listed below were found to be present in your water were recorded here. All sources of drinking water contain some naturally occurring contaminants. At low levels in our drinking water, these substances are generally not harmful. 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 2024 (unless otherwise noted). The EPA/WDOH may only require us to monitor for certain contaminants less frequently 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, there may be terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions at the end of the tables.

Contaminants Detected								
Contaminants	Units	MCL	MCGL	Your Water	Range	Year Sampled	Violation	Typical Source
Monitored at Groundwater Sources								
Contaminants were not detected in source water as of 2024.								
Monitored in the Distribution System								
Total Coliform	-	TT	0	There were four total coliforms present in the 222 samples taken in 2024. None had E. coli present.		2024	No	Naturally present in the environment
TTHM	ppb	80	N/A	4.6	0 – 12.2	2024	No	Byproduct of drinking water disinfection
HAA5	ppb	60	N/A	1.0	0 – 4.15	2024	No	Byproduct of drinking water disinfection
Chlorine	ppm	4 (MRDL)	4 (MRDGL)	0.61 (annual average)	0.03 – 1.7	2024	No	Water additive used to control microbes
Monitored at Customer Tap								
Lead	ppb	15 (Action Level)	0	3.0 (90th Percentile)	0 – 9.0 (30 samples)	2024	No	Corrosion of household plumbing systems; Erosion of natural deposits
Copper	ppm	1.3 (Action Level)	0	0.1 (90th Percentile)	0 – 0.16 (30 samples)	2024	No	Corrosion of household plumbing systems; Erosion of natural deposits

Secondary Drinking Water Contaminants

The EPA has established National Secondary Drinking Water Regulations that set water quality standards for 15 contaminants, including Manganese. They are established primarily as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color, and odor, however, EPA does not enforce these "secondary maximum contaminant levels" (SMCLs). These contaminants are only considered to have potential health implications at very high concentrations. If SMCLs are exceeded, Naval Base Kitsap consults with the Washington State Department of Health (WDOH) to determine if any actions are required.

Manganese is a common element found in the earth. Water percolating through soil can dissolve minerals containing manganese and hold them in solution, carrying them into our wells. In 2015, 2019 & 2021, water source samples exceeded the SMCL for manganese. The WDOH was notified, and we took and analyzed samples inform the distribution system; all sample results were less than the SMCL. The WDOH prescribed no further action.

Secondary Contaminants Detected								
Contaminants	Units	SMCL	MCGL	Highest Level Detected	Range	Most Recent Sampling	Violation	Typical Source
Monitored at Groundwater Sources								
Chloride	ppm	250	250	3.65	0 – 3.65	2023	No	Erosion of natural deposits
Conductivity	µS/cm	700	None	172	144 – 172	2023	No	Erosion of natural deposits
Hardness	ppm	None	None	74.3	0 – 74.3	2023	No	Erosion of natural deposits
Magnesium	ppm	None	None	0.7	0 – 0.7	2023	No	Erosion of natural deposits
Manganese	ppm	0.05	None	0.7	0.01 – 0.7	2024	Yes[1]	Erosion of natural deposits
Sodium	ppm	None[2]	20[2]	7.5	5.8 – 7.5	2023	No	Erosion of natural deposits
Sulfate	ppm	250	None	4.7	0 – 4.7	2023	No	Erosion of natural deposits
Turbidity	NTU	None	None	0.3	0 – 0.3	2023	No	Soil runoff
Iron	ppb	300	300	180	0 – 180	2023	No	Erosion of natural deposits

[1] This is an exceedance of the SMCL, which means the limits are set primarily to protect the aesthetic qualities of drinking water and are not federally enforced. The WA Department of Health (WDOH) was informed of this exceedance. Per WDOH instruction, samples within the distribution system were taken that all showed concentrations below the SMCL. No further actions were recommended by the WDOH. Manganese is a common element. Water percolating through soil can dissolve minerals containing manganese and hold them in solution, carrying them into our wells.

[2] Although no MCL is established for sodium, the EPA has established a recommended level of 20 ppm as a level of concern for those consumers who may be restricted for daily sodium intake in their diets.

Definitions and Abbreviations

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

Contaminant – Any physical, chemical, biological, or radiological substance or matter in water.

HAA5 – Haloacetic Acid: By-product of drinking water disinfection.

HI – Hazard Index: An approach that determines the health concerns associated with mixtures of certain PFAS in finished drinking water. Low levels of multiple PFAS that individually would not likely result in adverse health effects may pose health concerns when combined in a mixture. The Hazard Index MCL represents the maximum level for mixtures of PFHxS, PFNA, HFPO-DA, and/or PFBS allowed in water delivered by a public water system. A Hazard Index greater than 1 requires a system to take action.

Lead and Copper 90th Percentile: Out of every 10 homes sampled, 9 were at or below this level.

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: The average of analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

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 based on the best available treatment technology. Under the Safe Drinking Water Act, the EPA establishes these MCLs for compliance purposes.

MCLG – Maximum Contaminant Level Goal: In drinking water, the level of a contaminant below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL – Maximum Residual Disinfectant Level: 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.

MRDLG – Maximum residual disinfectant level goal: 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.

N/A – Not Applicable

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

Pesticide: Generally, any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest.

Herbicide: Any chemical(s) used to control undesirable vegetation.

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

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 lowest and highest analytical results of a reported contaminant

SMCL – Secondary Maximum Contaminant Level: These standards are developed primarily to protect the aesthetic qualities of drinking water but are not federally enforced. Exceeding SMCL requires notification to the WA Department of Health.

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

TTHM – Total Trihalomethanes: By-product of drinking water disinfection.

µS/cm – micro-Siemens per centimeter: A standard measurement of conductivity in water.

PFAS Information

What are per- and polyfluoroalkyl substances and where do they come from?

Per- and polyfluoroalkyl substances (PFAS) are a group of thousands of man-made chemicals. PFAS have been used in a variety of industries and consumer products around the globe, including in the U.S., since the 1940s. PFAS are found in many consumer products, as well as in industrial products, like certain firefighting agents called aqueous film forming foam (AFFF). PFAS is also found in essential use applications such as in microelectronics, batteries, and medical equipment. PFAS chemicals are persistent in the environment, and some are persistent in the human body – meaning they do not break down and they can accumulate over time.

Is there a regulation for PFAS in drinking water?

On April 26, 2024, the United States Environmental Protection Agency (EPA) published a National Primary Drinking Water Regulation (NPDWR) final rule on drinking water standards for six PFAS under the Safe Drinking Water Act (SDWA). The rule establishes the following maximum contaminant levels (MCLs):

EPA's PFAS Maximum Contaminant Levels			
Compound	Unit	MCL	MCLG
PFOA	ppt	4	0
PFOS	ppt	4	0
PFHxS	ppt	10	10
PFNA	ppt	10	10
HFPO-DA (commonly known as GenX Chemicals)	ppt	10	10
Mixtures containing two or more of PFHxS, PFNA, HFPO-DA, and PFBS	N/A	1 Hazard Index[1]	1 Hazard Index

[1] The Hazard Index is a long-established approach that EPA regularly uses to understand health risk from chemical mixture. The HI is made up of a sum of fractions. Each fraction compares the level of each PFAS measured in the water to the highest level determined not to have risk of health effects.

Under the NPDWR, regulated public water systems (PWS) are required to complete initial monitoring by April 26, 2027. Beginning April 26, 2027, regulated PWSs will conduct ongoing compliance monitoring in accordance with the frequency dictated by the rule and as determined by the initial compliance monitoring results. Regulated PWSs must demonstrate compliance with the Maximum Contaminant Levels (MCLs) by April 26, 2029.

In order to provide safe drinking water to all Department of Defense (DoD) personnel, OSD policy extends this requirement to all DoD systems which provide drinking water for human consumption, regardless of size of the drinking water system. In addition to the six regulated compounds, DoD-owned systems are required by DoD policy to monitor for all 25 compounds detected when using EPA Method 533.

Protecting the health of our personnel, their families, and the communities in which we serve is a priority for the Department. DoD is committed to complying with requirements of the NPDWR and the continued provision of safe drinking water to those that work and live on DoD installations.

Has NBK Bangor tested its water for PFAS?

Yes. In November 2023 samples were collected from Groundwater Sources S01, S02, S09, and S04.

We are pleased to report that drinking water testing results for all 25[1] PFAS covered by the sampling method, including the six regulated PFAS, were not detected in your water system.

What is next?

NBK Bangor will continue to monitor for PFAS in accordance with the EPA regulation and DoD policy. Once required initial monitoring information is available, we will calculate the Running Annual Averages (RAA) for the regulated PFAS and will compare those numbers to the MCL and Hazard Index (HI) trigger levels. This will determine what our continuing monitoring requirements will be beginning in 2027, and if needed, we will plan operational or infrastructure changes to ensure our water complies with the PFAS MCLs and HI by April 2029 in accordance with the SDWA.

[1] Total number of analytes must be verified against your sample results dependent upon the method(s) used. Method 533 covers 25 compounds. Add Method 537.1 and 29 unique compounds are measured.

Looking For More Information on your Water Quality?

Washington State Water System Data (Sentry Internet)

Washington Department of Health (WDOH) maintains a site called Sentry Internet, that houses Washinton State Water System Data. You can use this data to find up-to-date information on our water system along with testing results of our drinking water. To learn more and access Sentry Internet, visit WDOH's Office of Drinking Water Page: https://doh.wa.gov/data-statistical-reports/environmental-health/drinking-water-system-data/sentry-internet

Contact Us

If you have any questions concerning the information in this report, contact Naval Base Kitsap Public Affairs Office via email at NBKPAO@us.navy.mil.

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:

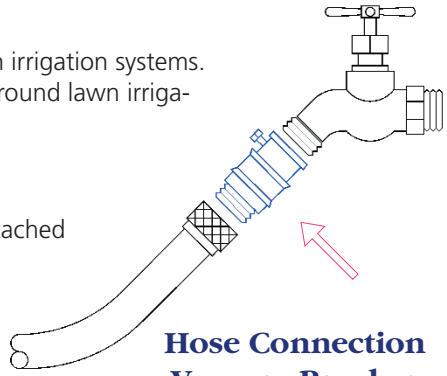
- ✔ Keep the ends of hoses clear of all possible contaminants.
- ✔ If not already equipped with an integral (built-in) vacuum breaker, buy and install hose bib type vacuum breakers on all threaded faucets around your home. These devices are inexpensive and are available at hardware stores and home improvement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