2024

Annual Consumer Confidence Report on the Quality of Naval Radio Station Jim Creek

This is an annual report on the quality of water delivered by the drinking water system at Naval Radio Station Jim Creek, Washington for the calendar year 2024. 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.

Drinking Water System Information

Base Location: Naval Radio Station Jim Creek, Washington
Number of Water Systems on this Base: 1

List of Water Sources(s):

Source Number	Source Name	Water Type	Location	Active or Inactive	Treatment(s)	Reason for Treatment(s)
S02	AGB800 Bldg No 85 Well	Groundwater	Bldg No. 85	Active	Chlorination	Manganese

Testing Frequency:

Contaminant	# of Samples Required	Testing Frequency	Testing Standard or Exemption?	Last Sample Date	Next Sample Due Date
Nitrate	1	Annually	Standard	07/10/2024	Jul 2025
Inorganic Contaminants	1	9 year	Waiver	04/16/2019	Apr 2028
Arsenic	1	3 year	Standard	05/18/2022	Oct 2025
Manganese	1	3 year	Standard	03/13/2024	Mar 2027
Volatile Organic Contaminants (VOCs)	1	6 year	Waiver	07/10/2024	Jul 2030
Herbicides	1	9 year	Waiver	09/05/2018	Sep 2027
Pesticides	0	-	Exempt	-	-
Soil Fumigants	0	-	Exempt	-	-
PFAS	1	Two consecutive samples	Initial	10/31/2023	Jul 2025

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Source Monitoring:

Contaminants	MCLG	MCL or SMCL	Water Reading	Sample Date	Level Exceeded?	Typical Sources of Contaminant
Primary Contaminants						
Nitrate (ppm)	10	10	ND	07/10/24	No	
Arsenic (ppb)	0	10	1.4	05/18/22	No	
Secondary Contaminants						
Manganese (ppb)	50	50	ND	03/13/24	No	

Distribution System Monitoring:

Contaminants	MCLG	MCL[1]	Water Reading	Range		Sample Date	Level Exceeded?	Typical Sources of Contaminant
				Low	High			
Volatile Organic Contaminants								
Haloacetic Acids (HAA) (ppb)	N/A	60	ND	-	-	8/16/23	No	
Total Trihalomethane (TTHM) (ppb)	N/A	80	ND	-	-	8/16/23	No	

[1] Denotes the highest Locational Running Annual Average (LRAA) for the year.

Contaminants	MCLG	AL	Water Reading (90th %)[1]	Sample Date	Number of Samples Exceeding AL	Level Exceeded?	Typical Sources of Contaminant
Inorganic Contaminants							
Lead (ppb)	0	15	0.9	7/10/24	0	No	
Copper (ppm)	0	1.3	0.05	7/10/24	0	No	

[1] This is the 90th% value from the most recent testing.

Additional Tests and their Results:

Contaminant	Detected?	Additional Information		
		Measured Amount	Exceeded Level?	Contaminant Source
Coliform	No	Absent	No	
PFOA/PFAS	No	ND	No	

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):
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.

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

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).

pCi/L: Pico-curies per liter. A measurement of radioactivity in water.

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

Range: Represents the lowest and highest analytical results of a reported contaminant.

Information from the Environmental Protection Agency (EPA)

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

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 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):

- perfluorooctane sulfonic acid (PFOS) = 4 ppt
- perfluorooctanoic acid (PFOA) = 4 ppt
- hexafluoropropylene oxide dimer acid (HFPO-DA, commonly known as GenX) = 10 ppt
- perfluorononanoic acid (PFNA) = 10 ppt
- perfluorohexane sulfonic acid (PFHxS) = 10 ppt
- HI MCL for PFHxS, PFNA, perfluorobutane sulfonic acid (PFBS), and GenX = 1 (unitless).

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 Naval Radio Station Jim Creek tested its water for PFAS?

Yes. In October 2023, first initial samples were collected from the wellhead located at Building 85 at Naval Radio Station Jim Creek.

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

What is next?

Naval Radio Station Jim Creek will collect another round of samples in 2025 to fulfill the initial two consecutive monitoring requirements for PFAS for systems with population under 10,000 people in accordance with EPA.

Lead Service Line Inventory

The Lead and Copper Rule Revisions (LCRR) that went into effect in December 2021 require water systems to complete an inventory of the service lines in their system and report that information. Navy Region Northwest completed lead service line inventories in compliance with EPA LCRR. 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/

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:

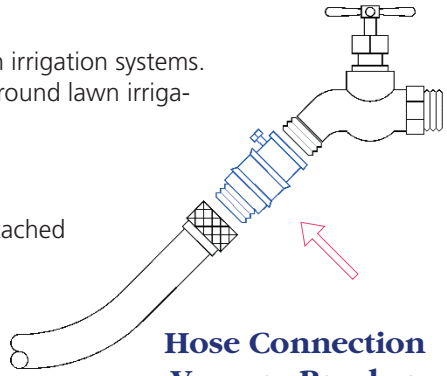
- ✔ Keep the ends of hoses clear of all possible contaminants.
- ✔ If not already equipped with an integral (built-in) vacuum breaker, buy and install hose bib type vacuum breakers on all threaded faucets around your home. These devices are inexpensive and are available at hardware stores and home improvement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

Manganese in Drinking Water

What Customers Should Know

Manganese is a naturally occurring mineral found in rocks, groundwater, and surface water. Small amounts of manganese are essential nutrients for humans. Your body needs some manganese to stay healthy, but too much can be harmful, especially to infants.

Manganese in your water can also stain your laundry and create a brownish-black or black stain on your toilet, shower, bathtub, or sink. Manganese can make your water look, smell, or taste bad.

Why is manganese a problem?

Research worldwide has given us a more complete understanding of how manganese interacts with drinking water systems and its human health impacts. Current research suggests:

- Exposure to manganese above 0.1 mg/L has been associated with increased risks for negative health outcomes for children under 5 years of age.
- Manganese builds up in water pipes, potentially resulting in drinking water with manganese at much higher levels than are present in the source water.
- The buildup of manganese in pipes can absorb other metals that may also be in water, like lead or arsenic. When water quality changes, the build-up of all these contaminants may release rapidly in high amounts.
- We cannot rely on the taste or look of drinking water to know if there are high levels of manganese of concern to human health because it may not be visible or noticeable when dissolved in the water.

Washington State Department of HEALTH

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To request this document in another format, call 1-800-525-0127. Deaf or hard of hearing customers, please call 711 (Washington Relay) or email doh.information@doh.wa.gov.

Is manganese of particular concern for infants?

Yes, infants are the most sensitive age group to excess manganese. Too much manganese exposure during their development can cause learning and behavioral problems. Even short-term exposures to elevated manganese in drinking water (0.1 mg/L) during early childhood have been shown to increase the likelihood of a neurodevelopmental disorder diagnosis (Schullehner et al (2020)).

While manganese is included in baby formula to support healthy development, too much can cause negative health effects. Manganese is a "goldilocks compound." Too much or too little is harmful – you need just the right amount. When manganese levels in drinking water are above 0.3 mg/L, infants under 6 months of age should immediately stop consuming the water or formula prepared with the water.

What you can do

- If your drinking water is above 0.05 mg/L, contact your water system provider, and ask them to install water treatment for manganese removal on the water system sources.
- If your drinking water tests at or above the health advisory level 0.3 mg/L, use another source of water, like bottled water, for preparing baby formula for infants and young children. Adults who drink water with manganese levels above the health advisory levels are at a lower risk than infants and children.
- Boiling water may increase manganese concentration because it removes only the water, so it is not recommended.
- Manganese is not easily absorbed through the skin. There are no known health concerns from bathing, showering, brushing teeth, or washing clothes in water with high levels of manganese.
- If you have been consuming water with high levels of manganese and have concerns about your health, talk to your health care provider.

Recommendations for Water Systems

The Washington State Department of Health Office of Drinking Water (ODW) is modifying our recommendations for public water systems that have manganese in their water supply. For many years, manganese in drinking water was only considered an aesthetic concern, causing discoloration and staining. However, recent studies show negative health effects from exposure to high levels of manganese in drinking water. We have used this new information to revise our guidelines for your water system.

- All water systems with source manganese levels greater than 0.05 mg/L should install and operate manganese removal treatment at the water source.
- Systems operating manganese treatment should strive to meet a removal goal of less than or equal to 0.02 mg/L at entry point to the distribution system.

- All systems with elevated manganese or operating manganese treatment should have accurate manganese field testing equipment.
- Water systems that have distribution manganese levels of 0.3 mg/L or greater should issue public notification to their customers.

Manganese Levels of Concern in Drinking Water

In 2004, EPA set health advice for manganese in drinking water to keep people safe (0.3 mg/L) and a lower aesthetic standard (0.05 mg/L) to prevent staining and a bad smell or taste in the water. Both standards are voluntary, and it's up to individual water systems to test for or treat manganese in drinking water. The table below shows health advice and aesthetic standards set for manganese by various agencies.

Manganese concentration	Recommendation / Action Levels
0.02 mg/L	ODW (2023) recommends water systems maintain this level or less at entry point to the water distribution system after treatment.
0.05 mg/L	ODW (2023) recommends treatment for manganese removal at levels greater than 0.05 mg/L. EPA Secondary Maximum Contaminant Level (SCML) based on aesthetic effects.
0.08 mg/L	World Health Organization (2021) provisional health-based guidance value for bottle fed infants. Also protective of the general population.
0.1 mg/L	Minnesota Dept of Health (2018) recommended limit for water fed to infants during their first 12 months of life. This is health-based advice to protect infants from learning and behavioral problems.
0.12 mg/L	Health Canada (2019) maximum acceptable concentration (MAC) for drinking water. Set to protect infants, also protective of the general population.
0.3 mg/L	EPA Health Advisory Level (2004): • Applies to short-term consumption (10 days) for infants less than 6 months old. • Applies to lifetime consumption for general population. ODW recommends that water systems issue public notice to users when manganese level in drinking water is above this level.
1.0 mg/L	EPA Health Advisory Level (2004) for short-term exposure (10 days) for children 6 months and older and for adults.

If you do not know the manganese level in your drinking water, contact your water system provider.
If you have questions or concerns about the quality of your drinking water, contact your water system provider.

For more information, visit **DOH Office of Drinking Water** (www.doh.wa.gov/community-and-environment/drinking-water/office-drinking-water) or contact us at:

Northwest Regional Office, Kent – (253) 395-6750

Southwest Regional Office, Tumwater – (360) 236-3030

Eastern Regional Office, Spokane – (509) 329-2100