



# NAVSTA ROTA DRINKING WATER 2023 CONSUMER CONFIDENCE REPORT 01 JULY 2024



## What is a Consumer Confidence Report?

A Consumer Confidence Report (CCR) provides details about where your drinking water comes from, what it contains, and how it compares to standards set by regulatory agencies. It is required annually and includes general and mandatory information to educate everyone about our water source, water treatment processes, water quality requirements, and other details to help assure you that Naval Station Rota water is safe to drink.

## Is our water safe to drink?

**YES. Sample analysis conducted in 2023 has verified that NAVSTA Rota drinking water is safe to drink.** We are proud to support the Navy's commitment to provide safe and reliable drinking water to Naval Station Rota water users.

NAVSTA Rota's drinking water system provides water that is safe to drink. In his role as the Chairman of the Installation Water Quality Board, the Installation Commanding Officer declared NAVSTA Rota's drinking water Fit for Human Consumption (i.e.: potable) in a Record of Decision dated 17 December 2013. Since that time, this declaration is confirmed through routine monthly, quarterly and annual laboratory testing results conducted on a suite of chemical and biological constituents.

Our drinking water fully complies with the Department of Defense's (DOD) Spain Final Governing Standards (FGS), which are derived from U.S. Environmental Protection Agency (EPA) and Spain drinking water standards. When Spain and U.S. standards differ, the *most protective* standard is adopted into the FGS. A detailed list of constituents that we test for in our drinking water is included in this report, along with a comparison to the maximum levels considered safe for the general public.

## Where does our water come from and how is it treated?

NAVSTA Rota purchases finished, treated water from the *Agencia Andaluza del Agua*. This water comes from *Los Hurones* and *Guadalcaén* reservoirs and is treated at the *Cuartillos* water treatment plant where contaminants and suspended solids are removed through sedimentation, sand filtration and disinfection with chlorine. The water then flows by gravity to the *San Cristóbal* ground storage facilities where it is later distributed to customers including NAVSTA Rota.

Water received from the *Agencia Andaluza del Agua* is measured continuously for turbidity at the point where it enters the installation. NAVSTA Rota drinking water storage is stored in reservoir tanks and distributed throughout the installation through a network of piping and pump stations. Due to the size of the NAVSTA Rota storage and distribution system, booster chlorination is added to our drinking water to ensure that disinfection levels are maintained throughout the system. This additional chlorination can sometimes result in disinfection by-products, and these are removed using granular activated carbon (GAC) filters located within the drinking water distribution system.



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### Source Water Assessment

In June 2022, Naval Facilities Engineering Systems Command (NAVFAC) conducted a comprehensive sanitary survey of the NAVSTA Rota drinking water system. This survey provided an evaluation of the adequacy of the drinking water source, facilities, equipment, operation and maintenance for producing and distributing safe drinking water. NAVSTA Rota is continually improving the drinking water system based on the recommendations in the report. A new sanitary survey will be conducted in June 2025 to reevaluate drinking water system compliance.

### Why are there contaminants in drinking water?

Drinking water, including bottled water, may reasonably be expected to contain small amounts of some contaminants. 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 or through the ground, it dissolves naturally occurring contaminants.

Due to this, some substances may be present in source drinking water, such as:

- **Microbial contaminants**, such as viruses and bacteria, that may come from wildlife, sewage treatment plants, septic systems, and livestock;
- **Disinfection products**, such as chlorine and chloramine used to remove pathogens from the water and disinfection by-products such as Trihalomethanes;
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses;
- **Inorganic contaminants**, naturally occurring such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming;
- **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 storm water runoff, and septic systems; and
- **Radioactive contaminants**, which can be naturally occurring in surface rocks or brought to the surface as the result of oil and gas production or mining activities.

NAVSTA Rota's drinking water is from the *Agencia Andaluza del Agua*, which uses rivers, lakes and reservoirs for its source water. The presence of contaminants does not necessarily indicate that water poses a health risk. In order to ensure that tap water is safe to drink, regulations limit the amount of certain contaminants in water provided by public water systems. Regular sampling is conducted to detect the level of contaminants in the water system.



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If the results of sampling conducted by NAVSTA Rota are above regulatory levels, you will be notified through the following:

- Coastline newspaper
- NAVSTA Rota Facebook: <https://www.facebook.com/USNavalStationRota>
- All-Hands emails.

You can learn more about contaminants and any potential health effects by visiting the United States Environmental Protection Agency (EPA) Drinking Water Requirements website at <https://www.epa.gov/dwreginfo> or by calling the EPA Safe Drinking Water Hotline at +01-800-426-4791.

## Some People Must Use Special Precautions

There are people who 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 (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the EPA's Safe Drinking Water Hotline: 1-800-426-4791.

## 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 have been used to make coatings and products that are used as oil and water repellents for carpets, clothing, paper packaging for food, and cookware. They are also contained in some foams (aqueous film-forming foam or AFFF) currently used for fighting petroleum fires at airfields and in industrial fire suppression processes. 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 10, 2024, the US EPA established MCLs for a subset of PFAS chemicals.

Compound	Final MCLG	Final MCL (enforceable levels)
PFOA	Zero	4.0 parts per trillion (ppt) (also expressed as ng/L)
PFOS	Zero	4.0 ppt



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Compound	Final MCLG	Final MCL (enforceable levels)
PFHxS	10 ppt	10 ppt
PFNA	10 ppt	10 ppt
HFPO-DA (commonly known as GenX Chemicals)	10 ppt	10 ppt
Mixtures containing two or more of PFHxS, PFNA, HFPO-DA, and PFBS	1 (unitless) Hazard Index	1 (unitless) Hazard Index

EPA requires implementation of sampling in accordance with the new MCLs within three years of the publication date and implementation of any required treatment within five years.

These limits did not apply for the 2023 calendar year because they had not been published. However, the DoD proactively promulgated policies to monitor drinking water for PFAS at all service owned and operated water systems at a minimum of every two years. The DoD policy states that if water sampling results confirm that drinking water contains PFOA and PFOS at individual or combined concentrations greater than the 2016 EPA health advisory (HA) level of 70 ppt, water systems must take immediate action to reduce exposure to PFOS or PFAS. For levels less than 70 ppt but above the 4 ppt level (draft at the time of policy publication), DoD committed to planning for implementation of the levels once EPA’s published MCLs take effect.

**Has Naval Station Rota tested its water for PFAS in 2023?**

Yes. In July 2023, samples were collected from GAC OUT Bldg. #3201. We are pleased to report that **PFAS were not detected** in your water system. Drinking water testing results were below the Method Reporting Limit (MRL) for all 29 PFAS compounds covered by the sampling method, including PFOA and PFOS. In accordance with DoD policy, the water system will be re-sampled every two years for your continued protection.

**Water Quality Data Table**

The table below lists all of the routine drinking water contaminants and relevant testing data collected during the 2023 calendar year. NAVSTA Rota tests for many more chemicals than are found in this table; only those contaminants detected in the water are presented in the table. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. All substances detected in NAVSTA Rota’s drinking water are below allowable levels and meet EPA and FGS requirements.



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Contaminant	MCL, TT, or MRDL	Your Water (Average)	Range		Sample Date	Violation	Typical Source
			Low	High			
Chlorine (as Cl <sub>2</sub> ) (ppm)	4	<b>0.90</b>	0.03	2.34	2023	No	Water additive used to control microbes
TTHMs -Total Trihalomethanes (ppb)	80	<b>30.1</b>	15.3	41.2	2023	No	By-product of drinking water disinfection
HAA5-Haloacetic Acids (ppb)	60	<b>9</b>	6	13	2023	No	By-product of drinking water disinfection
Total Coliform (positive samples/month)	0	<b>0</b>	N/A	N/A	2023	No	Naturally present in the environment. Used as an indicator that other, potentially-harmful, bacteria may be present
Dalapon (ppb)	200	<b>&lt;1</b>	<1	<1	2023	No	Runoff from herbicide used on rights of way
Barium (ppb)	2000	<b>78</b>	75	81	2023	No	Discharge of drilling wastes; Erosion of natural deposits
Chlorides (ppm)	250	<b>51.5</b>	51	52	2023	No	Erosion of natural deposits; Discharge from fertilizer and pesticides
Fluoride (ppm)	4	<b>0.15</b>	0.15	0.15	2023	No	Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Manganese (ppb)	50	<b>1.35</b>	1	1.7	2023	No	Erosion of natural deposits; Discharge from fertilizer
Aluminum (ppb)	200	<b>66.5</b>	74	59	2023	No	Natural in surface water; Used for water treatment
Sulfates (ppm)	250	<b>120</b>	120	120	2023	No	Erosion of natural deposits; Leaching
Nitrate [measured as Nitrogen] (ppb)	10000	<b>1123</b>	779	1740	2023	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrite [measured as Nitrogen] (ppb)	500	<b>&lt;10</b>	<10	<10	2023	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Gross Alfa (pCi/L)	2.7	<b>0.375</b>	0.3	0.45	2023	No	Erosion of natural deposits
Gross Beta (pCi/L)	27	<b>2.4</b>	3	1.8	2023	No	Decay of natural and man-made deposits.
Tritium (pCi/L)	2702	<b>20</b>	13	27	2023	No	Erosion of natural deposits



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Contaminant	MCL, TT, or MRDL	Your Water (Average)	Range		Sample Date	Violation	Typical Source
			Low	High			
Chromium (ppb)	50	<b>1.6</b>	1.6	1.6	2023	No	Erosion of natural deposits. Industry.
Nickel (ppb)	20	<b>11.6</b>	4.2	19	2023	No	Erosion of natural deposits. Industry.
Sodium (ppm)	200	<b>31</b>	31	31	2023	No	Erosion of natural deposits.

The table below lists drinking water contaminants and relevant testing data that is collected on a non-annual basis. The most recent testing results are shown.

Contaminant	AL	Your Water	Sample Date	# Samples Exceeding AL	Exceeds MCL	Typical Source
Copper - action level at consumer taps (ppm)	1.3	<b>0.15<sup>(1)</sup></b>	2022	0	<b>No</b>	Corrosion of household plumbing systems; Erosion of natural deposits
Lead - action level at consumer taps (ppb)	10	<b>&lt;1.0<sup>(1)</sup></b>	2022	0	<b>No</b>	Corrosion of household plumbing systems; Erosion of natural deposits
Cryptosporidium oocysts/liter		<b>&lt;0.075<sup>(2)</sup></b>	2022	0	<b>No</b>	Animal waste
<sup>(1)</sup> 90 <sup>th</sup> Percentile						
<sup>(2)</sup> Cryptosporidium was not detected in 24-month of sampling, resulting in the average value of <0.075 oocysts/liter.						

Note: All other Synthetic Organic Compounds were not detected.



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<b>Unit Descriptions</b>	
<b>Term</b>	<b>Definition</b>
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)
pCi/L	pCi/L: picocuries per liter (a measure of radioactivity)
NA	NA: not applicable
ND	ND: Not detected
ng/l	ng/l: Nanogram/liter, or parts per trillion (ppt)
NR	NR: Monitoring not required, but recommended.

<b>Important Drinking Water Definitions</b>	
<b>Term</b>	<b>Definition</b>
AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements.
CCR	Consumer Confidence Report
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.
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.
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.
MRL or RL	Method Reporting Limit: The lowest quantifiable reporting limit that can be achieved when an analysis is performed under ordinary laboratory conditions.
TT	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.



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## Additional Information for Lead

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing.

NAVSTA Rota Public Works is responsible for providing high-quality drinking water and has direct control over the materials used in plumbing components on the facility. This ensures that no lead service lines or components are used on the drinking water system. As a general safety practice, whenever - and wherever - you plan to use tap water for drinking or cooking, you can minimize the potential for lead exposure by flushing the tap for 30 seconds to 2 minutes prior to use. Information on lead in drinking water and steps you can take to minimize exposure is available from the EPA Safe Drinking Water website: [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Additional Information for Cryptosporidium

Cryptosporidium is a protozoan parasite found in humans, other mammals, birds, fish, and reptiles. It is common in the environment and widely found in surface water supplies. The oocysts of Cryptosporidium are very resistant to adverse factors in the environment and can survive dormant for months in cool, dark conditions such as moist soil, or for up to a year in clean water. Cryptosporidium oocysts are not easily killed by commonly used disinfectants. They are relatively unaffected by chlorine and chloramines in the concentrations that are used for drinking water treatment.

When someone is infected with Cryptosporidium, they may contract cryptosporidiosis, a disease which can cause diarrhea, stomach cramps, nausea, loss of appetite, and a mild fever. Cryptosporidium has become recognized as one of the most common causes of waterborne disease (drinking and recreational) in humans in the United States.

Cryptosporidium is regulated under EPA's National Primary Drinking Water Regulations. The MCLG for Cryptosporidium is 0, or no detection. The MCL for Cryptosporidium is based on having required treatment techniques including filtration and disinfection. NAVSTA Rota drinking water has gone through both of these treatment steps. Treatment systems that test for 24 months and show a cumulative result of <0.075 oocysts/liter are not required to provide additional treatment.

Cryptosporidium testing was conducted in January 2022. Following DoD policy, samples were collected from the inlet to the Granular Activated Carbon Plant, Building #3201. We are pleased to report that Cryptosporidium was not detected in your water system.





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## Points of Contact

If you have any questions regarding this report or about the drinking water processes, please contact one of the following:

Public Affairs Office  
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