



NAVSTA ROTA DRINKING WATER 2020 CONSUMER CONFIDENCE REPORT



01 JULY 2021

Is our water safe to drink?

Yes. Naval Station (NAVSTA) Rota's drinking water system provides water that is safe and Fit for Human Consumption (FFHC; or potable) as determined by the Installation Commanding Officer's Record of Decision dated 17 December 2013, and as routinely confirmed by laboratory sampling results (received monthly, quarterly, and yearly). We are proud to support the Navy's commitment to provide safe and reliable drinking water to our service members and their families. This annual Consumer Confidence Report (CCR) includes general and mandatory information to educate everyone about our water source(s), treatment processes, standard requirements, and other details to help assure you that our water is safe to drink.

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* requirement is adopted into the FGS. A detailed list of constituents found in our drinking water is included in this report, along with a comparison to the maximum levels considered safe for the general public by these standards.

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

NAVSTA Rota purchases treated water from the *Agencia Andaluza del Agua*. This water comes from *Los Hurones* and *Guadalcazín* 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. NAVSTA Rota maintains drinking water storage capacity through reservoir tanks in our drinking water distribution system and also has long water distribution lines. Turbidity is measured continuously at the entrance of NAVSTA Rota and to ensure disinfection is sustained throughout the extra storage and distribution, additional chlorination is performed. To maintain disinfection by products under the required level, additional filtration is accomplished by using granular activated carbon (GAC) filters.

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;



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- **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.

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. If the results are above regulatory levels, you will be notified in the Coastline newspaper, at NAVSTA Rota Facebook: <https://www.facebook.com/USNavalStationRota>, or through "All-Hands" emails. You can learn more about contaminants and any potential health effects by calling the Safe Drinking Water Hotline: 1-800-426-4791 or visiting the EPA's Drinking Water Requirements website: <https://www.epa.gov/dwreginfo>.

Source water assessment

In May 2018, Naval Facilities Engineering 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.

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.

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



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can take to minimize exposure is available from the EPA Safe Drinking Water website:
www.epa.gov/safewater/lead.

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 United States, 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) used for fighting petroleum fires at airfields and in industrial fire suppression processes because they rapidly extinguish fires, saving lives and protecting property. 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?

There is currently no established federal water quality regulation for any PFAS compounds. In May 2016, the EPA established a health advisory (HA) level at 70 parts per trillion (ppt) for individual or combined concentrations of perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS). Both chemicals are types of PFAS.

Out of an abundance of caution for your safety, the DoD's PFAS testing and response actions go beyond EPA Safe Drinking Water Act requirements. In 2020 the DoD promulgated a policy to monitor drinking water for PFAS at all service owned and operated water systems at a minimum of every three years.

The EPA's health advisory states that if water sampling results confirm that drinking water contains PFOA and PFOS at individual or combined concentrations greater than 70 parts per trillion, water systems should quickly undertake additional sampling to assess the level, scope, and localized source of contamination to inform next steps.

Has NAVSTA Rota tested its water for PFAS?

Yes. In November 2020 samples were collected from the outlet of the Granular Activated Carbon Plant, Building #3201. We are pleased to report that drinking water testing results were below the Method Reporting Limit (MRL: 1.8 ng/L) for all 18 PFAS compounds covered by the sampling method, including PFOA and PFOS. This means that PFAS were not detected in your water system. In accordance with DoD policy, the water system will be resampled every three years for your continued protection.

Water Quality Data Table

The table below lists all of the drinking water contaminants and relevant testing data collected during the 2020 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 allowed levels and meet EPA and FGS requirements.



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Water Quality Data Table

Contaminants	MCL, TT, or MRDL	Your Water (Average)	Range		Sample Date	Violation	Typical Source
			Low	High			
Chlorine (as Cl ₂) (ppm)	4	0.92	0.34	3.12	2020	No	Water additive used to control microbes
TTHMs -Total Trihalomethanes (ppb)	80	37	23	48	2020	No	By-product of drinking water disinfection
Total Coliform (positive samples/month)	1	1	N/A	N/A	2020	No	Naturally present in the environment. Used as an indicator that other, potentially-harmful, bacteria may be present
Dalapon (ppm)	0.2	0.00065	0.0001	0.0005	2020	No	Runoff from herbicide used on rights of way
Barium (ppm)	2	0.007	0.066	0.074	2020	No	Discharge of drilling wastes; Erosion of natural deposits
Chlorides (ppm)	250	47.5	46	49	2020	No	Erosion of natural deposits; Discharge from fertilizer and pesticides
Fluoride (ppm)	4	0.135	0.13	0.14	2020	No	Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Manganese (ppm)	0.05	<0.001	<0.001	<0.001	2020	No	Erosion of natural deposits; Discharge from fertilizer
Aluminum (ppm)	0.2	0.075	0.074	0.076	2020	No	Natural in surface water; Used for water treatment
Sulfates (ppm)	250	110	100	120	2020	No	Erosion of natural deposits; Leaching
Nitrate [measured as Nitrogen] (ppm)	10	1.207	0.896	1.530	2020	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrite [measured as Nitrogen] (ppm)	0.50	<0.01	<0.01	<0.01	2020	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Gross Alpha (pCi/L)	2.7	0.396	0	0.74	2020	No	Erosion of natural deposits
Contaminants	MCL, TT, or MRDL	Your Water (Average)	Range		Sample Date	Violation	Typical Source
			Low	High			
Gross Beta (pCi/L)	27	2.1	1.5	3.4	2020	No	Decay of natural and man-made deposits.
Tritium (pCi/L)	2702	5.85	4.9	6.8	2020	No	Erosion of natural deposits



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Radium 226+ Radium 228 (pCi/L)	5	0.885	0.022	1.155	2020	No	Erosion of natural deposits
Chromium (ppm)	0.05	0.00127	0.00025	0.0023	2020	No	Erosion of natural deposits. Industry.
Nickel (ppm)	0.02	0.00225	0.0022	0.0023	2020	No	Erosion of natural deposits. Industry.
Sodium (ppm)	200	29.5	28	31	2020	No	Erosion of natural deposits.

Contaminants	AL	Your Water	Sample Date	# Samples Exceeding AL	Exceeds MCL	Typical Source
Copper - action level at consumer taps (ppm)	1.3	0.14*	2019	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead - action level at consumer taps (ppb)	10	1.6*	2019	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
*- 90 th Percentile						

Note: All other Synthetic Organic Compounds were not detected.

Per- and polyfluoroalkyl substances (PFAS)

Contaminants (ng/L)	RL	Your Water	Sample Date	Violation
Perfluorohexanoic acid	1.8	<1.8	Nov 2020	No
Perfluoroheptanoic acid	1.8	<1.8	Nov 2020	No
Perfluorooctanoic acid	1.8	<1.8	Nov 2020	No
Perfluorononanoic acid	1.8	<1.8	Nov 2020	No
Perfluorodecanoic acid	1.8	<1.8	Nov 2020	No
Perfluorotridecanoic acid	1.8	<1.8	Nov 2020	No
Perfluorotetradecanoic acid	1.8	<1.8	Nov 2020	No
Perfluorobutanesulfonic acid	1.8	<1.8	Nov 2020	No
Perfluorohexanesulfonic acid	1.8	<1.8	Nov 2020	No
Perfluorooctanesulfonic acid	1.8	<1.8	Nov 2020	No
NEtFOSAA	1.8	<1.8	Nov 2020	No
NMeFOSAA	1.8	<1.8	Nov 2020	No
Perfluoroundecanoic acid	1.8	<1.8	Nov 2020	No
Perfluorododecanoic acid	1.8	<1.8	Nov 2020	No
HFPODA	1.8	<1.8	Nov 2020	No
9Cl-PF3ONS	1.8	<1.8	Nov 2020	No
11Cl-PF3OUdS	1.8	<1.8	Nov 2020	No
DONA	1.8	<1.8	Nov 2020	No



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Unit Descriptions	
Term	Definition
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
NR	NR: Monitoring not required, but recommended.

Important Drinking Water Definitions	
Term	Definition
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.
RL	Reporting Limit
TT	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.



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Points of Contact

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