



## NAVAL SUPPORT ACTIVITY (NSA) SOUDA BAY 2020 DRINKING WATER CONSUMER CONFIDENCE REPORT



### Is our water safe to drink?

Yes. Naval Support Activity (NSA) Souda Bay's drinking water system provides water that is safe and Fit For Human Consumption (FFHC, or potable) as initially determined by the Installation Commanding Officer's Record of Decision dated December 13, 2013, and as consistently confirmed by laboratory sampling results (received monthly, quarterly, and yearly).

Our drinking water fully complies with the Department of Defense's (DoD) Greece Environmental Final Governing Standards (FGS) which are derived from U.S. Environmental Protection Agency (EPA) and Greek drinking water standards. When Greek and U.S. standards are different, the *most protective* requirement is adopted into the FGS. This assures U.S. personnel and Greek employees receive drinking water which meets or is above both nation's requirements.

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

NSA Souda Bay purchases drinking water from the Chania Water Authority (DEYACH). The sources of the drinking water are deep wells and natural springs at the foot of the White Mountains. DEYACH chlorinates the water prior to distribution. NSA Souda Bay provides additional chlorination before the water is distributed around the base.

### Why are there contaminants in drinking water?

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants, since the sources of drinking water (both tap water and bottled water) are groundwater and natural springs. As water travels through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. It is important to note that 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. The sampling frequency is defined by the level of risk for each contaminant but also by how often and at what levels it has appeared in prior sampling events. If the results are above regulatory limits, you will be notified by e-mail and public notification. A detailed list of contaminants 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.

Contaminants that may be present in source water include:

- **Microbial contaminants**, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;
- **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;
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;
- **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; and
- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained from the Safe Drinking Water website, [www.epa.gov/safewater/sdwa](http://www.epa.gov/safewater/sdwa) and the EPA's Drinking Water Standards web site: <https://www.epa.gov/ground-water-and-drinking-water>.



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### Source water assessment

In July 2017 the Naval Facilities Engineering Command (NAVFAC), together with the Navy and Marine Corps Public Health Center (NMCPHC), conducted a comprehensive sanitary survey of the NSA Souda Bay drinking water system. Sanitary surveys are performed every three years and provide an evaluation of the adequacy of the drinking water source, facilities, equipment, operation and maintenance for producing and distributing safe drinking water. Due to Covid-19 travel restrictions, the Sanitary Survey scheduled for May 2020 was postponed a year, and conducted in May 2021. NSA Souda Bay has closed all open findings from the 2017 report and is awaiting the 2021 report.

### Do I need to use special precautions?

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. Some people who drink trihalomethanes in excess of the Maximum Contaminant Level (MCL) over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

EPA/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lower the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Water Drinking website, [www.epa.gov/safewater/sdwa](http://www.epa.gov/safewater/sdwa).

### 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. NSA Souda Bay Public Works Department (PWD) is responsible for providing high quality drinking water on base, and ensures that materials used in plumbing components are lead free. At home, when your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

### What are per- and polyfluoroalkyl substances (PFAS) 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.



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Out of an abundance of caution for your safety, the DoD PFAS testing and response actions go beyond EPA Safe Drinking Water Act requirements. In 2020 the DoD instituted a policy to test 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 NSA Souda Bay tested its Drinking Water for PFAS?**

Yes. In September 2020, samples were collected from NSA Souda Bay. We are pleased to report that drinking water testing results were below the Method Reporting Limit (MRL) 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 Tables**

During 2020, more than 150 tests were performed at NSA Souda Bay for over 80 contaminants. Unless otherwise noted, the table below (Table 1) only lists the contaminants that were detected during calendar year 2020. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. All contaminants detected in NSA Souda Bay drinking water are below the MCL allowed by FGS and EPA applicable requirements. A separate table (Table 2) lists the 18 PFAS compounds that were tested in 2020. None of the 18 PFAS compounds, including PFOA and PFOS, were detected in the water system.



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**Table 1.** Detected compounds under FGS and EPA rules.

<u>Parameter</u>	<u>FGS MCL</u>	<u>MCLG</u>	<u>Your Water</u>	<u>Sample Date</u>	<u>Violation</u>	<u>Typical Source</u>
Arsenic ( <b>ppb</b> )	10	0	0.14	2020	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Antimony ( <b>ppb</b> )	5	0	0.07	2020	No	Discharge from fire retardants, electronics, solder
Barium (ppm)	2	2	0.0814	2020	No	Erosion of natural deposits.
Chromium ( <b>ppb</b> )	50	50	5	2020	No	Erosion of natural deposits
Calcium (ppm)	No limit	NA	37	2020	No	Erosion of natural deposits.
Copper (ppm)	2	NA	0.0077	2020	No	Corrosion of plumbing systems.
Lead ( <b>ppb</b> )	10	NA	0.1	2020	No	Corrosion of plumbing systems.
Nickel ( <b>ppb</b> )	20	NA	0.28	2020	No	Erosion of natural deposits;
Sodium (ppm)	No limit	NA	7.83	2020	No	Erosion of natural deposits.
Total Nitrate/Nitrite (as Nitrogen) (ppm)	10	10	0.425	2020	No	Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits.
TTHMs (total trihalomethanes) ( <b>ppb</b> )	80	NA	18.5	2020	No	By-product of drinking water disinfection.

<u>Parameter</u>	<u>FGS MCL</u>	<u>Your Water</u>	<u>Sample Date</u>	<u>Violation</u>	<u>Typical Source</u>
Gross Alpha Activity (pCi/L)	15	0.13±6.8	2020	No	Naturally Occurring
Gross Beta Activity (pCi/L)	50	0.72±0.69	2020	No	Naturally Occurring
Combined Radium 226/228 (pCi/L)	5	0.5850	2020	No	Naturally Occurring

<u>Parameter</u>	<u>FGS AL</u>	<u>MC LG</u>	<u>90<sup>th</sup> percent tile</u>	<u>Sample Date</u>	<u>Samples Exceeding AL</u>	<u>Violation</u>	<u>Typical Source</u>
Copper – action level at consumer taps (ppm)	1.3	1.3	0.269	Sep 2020	0	No	Corrosion of household plumbing systems.
Lead – action level at consumer taps ( <b>ppb</b> )	15	0	8.3	Sep 2020	0	No	Corrosion of household plumbing systems.



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**Table 2.** Proactive testing for PFAS compounds (no current legal requirement to test)

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

**Unit Descriptions**

<u>Term</u>	<u>Definition</u>
ppm	Parts per million, or milligrams per liter (mg/L)
ppb	Parts per billion, or micrograms per liter (µg/L)
pCi/L	picocuries per liter (a measure of radioactivity)
ng/L	Nanogram per Liter
NA	NA: not applicable

**Important Drinking Water Definitions**

<u>Term</u>	<u>Definition</u>
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.
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.
AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements.

**Points of Contact**

For more information, please contact the Public Works Environmental Office, who are members of the Installation Water Quality Board, at DSN 314-266-1973, or commercial 28210-21973