



U.S. NAVAL AIR STATION (NAS) SIGONELLA – MARINAI HOUSING 2024 DRINKING WATER CONSUMER CONFIDENCE REPORT



Is our water safe to drink?

Yes. Naval Air Station (NAS) Sigonella's drinking water systems provide water deemed safe and certified "Fit for Human Consumption" (FFHC; that is safe for drinking, cooking, bathing, showering, dishwashing and maintaining oral hygiene) as determined by the Installation Commanding Officer's Record of Decision dated 02 Nov 2017 and as routinely confirmed by laboratory sampling results (received monthly, quarterly, and yearly). NAS Sigonella is proud to support the Navy's commitment to provide safe and reliable drinking water to our service members and their families. In fact, NAS Sigonella's four water systems were among the first overseas drinking water facilities to receive Conditional Certificates to Operate from Commander, Navy Installations Command (CNIC). This annual Consumer Confidence Report (CCR) for calendar year 2024 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) Italy Final Governing Standards (FGS), which are derived from the Overseas Environmental Baseline Guidance Document, U.S. Environmental Protection Agency (EPA) and Italian drinking water standards. When Italian 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.

NAS Sigonella's Commanding Officer and Naval Facilities Engineering Command (NAVFAC) Europe Africa Central Headquarters (EURAFCENT) recognize the importance of safeguarding the health and well-being of our Sigonella citizens.

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

The Marinai Family Housing Area purchases treated water from Pizzarotti & C., S.p.A. This water comes from three groundwater wells at a depth of 30 meters, which are located outside of the installation property. The water is treated at the Marinai Water Treatment Plant using multi-media filters, an advanced reverse osmosis (RO) membrane filtration system, and disinfection prior to distribution. Regardless of the differences in the source or the treatment process, all drinking water provided to the NAS Sigonella community must meet the same performance standards.

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, and can pick up substances resulting from the presence of animals or from human activity.

As a result, some contaminants 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 agricultural livestock operations;
- **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** 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 or be the result of oil and gas production and mining activities.

Drinking water from any source may also include **disinfection by-products**, formed when disinfectants used in water treatment plants react with bromide and/or natural organic matter (i.e., decaying vegetation) present in the source water. Different disinfectants produce different types or amounts of disinfection byproducts. Disinfection byproducts for which regulations have been established include trihalomethanes, haloacetic acids, bromate, and chlorite.

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. Sampling is conducted routinely, and its goal is to detect the level of any contaminants in the water system. If the results are above regulatory limits, a notification sent by an All Hands e-mail, by a Facebook post, and a post to the NAS Sigonella Environmental Services website <https://cnreurafcnt.cnic.navy.mil/Installations/NAS-Sigonella/Operations-and-Management/Environmental-Support/> will go to all personnel.

The U.S. Environmental Protection Agency (EPA) established a three-tier public notification plan for drinking water summarized in Table 1. NAS Sigonella follows this outline to ensure notifications occur in a timely manner when necessary.

Table 1. The 3 Tiers of Public Notification*

	Required Distribution Time	Notification Delivery Method
Tier 1: Immediate Notice	Any time a situation occurs where there is the potential for human health to be immediately impacted, water suppliers have 24 hours to notify people who may drink the water of the situation.	Should a Tier 1 notification be necessary, NAS Sigonella will notify you via an All Hands E-mail message and Facebook.
Tier 2: Notice as Soon as Possible	Any time a water system provides water with levels of a contaminant that exceed EPA or state standards or that hasn't been treated properly, but that doesn't pose an immediate risk to human health, the water system must notify its customers as soon as possible, but within 14 days of the violation.	NAS Sigonella will notify you of a Tier 2 concern through an All Hands E-mail message, and by post on Facebook.
Tier 3: Annual Notice	When water systems violate a drinking water standard that does not have a direct impact on human health (For Example, failing to take a required sample on time) the water supplier has up to a year to provide a notice of this situation to its customers.	Tier 3 notifications are published annually in this document, the Consumer Confidence Report.

*Definitions from EPA website. See <http://water.epa.gov/lawsregs/rulesregs/sdwa/publicnotification/basicinformation.cfm> and DOD Manual 4715.05, Volume 3 Overseas Environmental Baseline Guidance Document (OEBGD): Water.

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You can learn more about contaminants and any potential health effects by calling the EPA's Safe Drinking Water Hotline: +1-800-426-4791 or by visiting the EPA's Drinking Water Standards web site: <https://www.epa.gov/dwreginfo/drinking-water-regulations>.

Source Water Assessment

In May 2023, NAVFAC and the Navy and Marine Corps Force Health Protection Command (NMCPHC) conducted a comprehensive sanitary survey of the Marintai Housing Area 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. NAVFAC is continually improving the drinking water system based on the recommendations in the report.

Some People Must Use Special Precautions

Some individuals 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 consumers 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 or by visiting www.epa.gov/safewater/sdwa.

Additional Information for Lead

Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney or nervous system problems.

Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. NAVFAC Sigonella Public Works is responsible for providing high-quality drinking water and for ensuring that no lead service lines or components are used in the drinking water system. The NAS Sigonella lead service line inventory is updated periodically, and no lead service lines have been identified. Public Works cannot control the variety of materials used in plumbing components in your home. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. 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 several minutes prior to use. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <http://www.epa.gov/safewater/lead>.

To meet the EPA and Italy FGS action level for lead and copper, 90 percent of the buildings tested must have lead levels below 15 micrograms per liter (µg/L) and copper levels below 1.3 milligrams per liter (mg/L). This measurement is referred to as the 90th percentile, and it is reported in Table 2, Water Quality Data.

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NASSIG lead tap sampling data is posted on the Installation web page, <https://cnreurfcent.cniv.navy.mil/Installations/NAS-Sigonella/Operations-and-Management/Environmental-Support/> . The complete NAS Sigonella lead tap sampling data and lead service line inventory is available for review by contacting the Installation Water Quality Board via the Installation Environmental Program Director at 095-86-2725.

Water Quality Data Table

Table 2 identifies drinking water contaminants and relevant sampling data collected during the 2024 calendar year or the last year the sampling was conducted. NAS Sigonella samples 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. Tables 3 and 4 include common definitions and unit descriptions used in drinking water analysis.

Table 2. Results of Latest Required Drinking Water System Testing

Contaminants (Units)	MCLG or MRDLG	MCL, TT, or MRDL	Your Water	Range Low-High	Sample Date	Violation	Typical Source
Inorganic Components							
Arsenic (mg/L)	0	0.01	0.00002	0.00002	2024	NO	Erosion of natural deposits
Antimony (mg/L)	0.005	0.005	0.0001	0.0001	2024	NO	Discharge from petroleum refineries; fire retardants; ceramics; electronics
Barium (mg/L)	2	2	0.0142	0.0142	2024	NO	Discharge of drilling wastes; erosion of natural deposits
Boron (mg/L)	N/A	1	0.064	0.064	2024	NO	Erosion of natural deposits
Chloride (mg/L)	N/A	250	99.9	90.3-99.9	2024	NO	Erosion of natural deposits
Chromium (mg/L)	0.0	0.05	0.0012	0.0012	2024	NO	Erosion of natural deposits
Conductivity (µS/cm)	N/A	2,500	506	506-1031	2024	NO	Naturally present in the environment
Copper (mg/L)	1.3	1	0.0008	0.0008	2024	NO	Erosion of natural deposits
Dry Residues (mg/L)	N/A	1500	292	292-486	2024	NO	Erosion of natural deposits
Iron	N/A	0.200	0.016	<0.001-0.054	2024	NO	Erosion of natural deposits
Fluoride	N/A	4	0.054	0.054	2024	NO	Erosion of natural deposits
Lead (mg/L)	0	0.01	0.0001	0.0001	2024	NO	Erosion of natural deposits
Nickel (mg/L)	N/A	0.02	0.00062	0.00062	2024	NO	Erosion of natural deposits

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Contaminants (Units)	MCLG or MRDLG	MCL, TT, or MRDL	Your Water	Range Low-High	Sample Date	Violation	Typical Source
Nitrite (mg/L)	1	0.015	0.04	<0.01- 0.04	2024	NO	Runoff from fertilizer use; sewage; erosion of natural deposits
pH	N/A	6.5-9.5	7.4-8.3	7.4-8.3	2024	NO	Naturally present in the environment
Sodium (mg/L)	N/A	200	130.4	75.5-130.4	2024	NO	Erosion of natural deposits
Sulfate (mg/L)	N/A	250	91.7	48.8-91.7	2024	NO	Erosion of natural deposits
Total Hardness (as CaCO ₃ , mg/L)	N/A	150-500	18.9	7.02-18.9	2024	NO	Erosion of natural deposits
Vanadium	N/A	0.140	0.00007	0.00007	2024	NO	Erosion of natural deposits
Zinc	N/A	-	0.0167	0.0167	2024	NO	Erosion of natural deposits
Disinfectant and Disinfection By-Product Components							
Chlorine (mg/L)	4	4	1.4	0.5-1.4	2024	NO	Water additive used to control microbes
Haloacetic Acids, HAA (mg/L)	0.060	0.060	0.00210	<0.001- 0.00210	2024	NO	Byproduct of drinking water Disinfection
Trihalomethanes, TTHM (mg/L)	0.080	0.03	0.02901	0.0075- 0.02901	2024	NO	Byproduct of drinking water disinfection
Microbiological Components							
Total Coliforms		>1 positive sample per month	ND	N/A	2024	NO	Naturally present in the environment
Colony Counts at 22C		No abnormal change	11	4-11	2024	NO	Naturally present in the environment
Colony Counts at 37C		No abnormal change	11	2-11	2024	NO	Naturally present in the environment
Turbidity (NTU)	TT	N/A	1.5	<0.2-1.5	2024	NO	Soil runoff
Lead (µg/L)	15	3.7		<0.1 – 4.8	MAR 2024	NO	Corrosion of household plumbing

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Contaminants (Units)	AL	Your Water (90 th Percentile)	Range Low-High	Sample Date	Violation	Typical Source
Current Year Data						
Lead and Copper (taken at 20 consumer taps)						
Lead (µg/L)	15	2.3	< 1.0 – 2.6	AUG 2024	NO	Corrosion of household plumbing
Copper (µg/L)	1300	17.9	< 5.0 – 32.3	AUG 2024	NO	Corrosion of household plumbing
Lead (µg/L)	15	3.7	<0.1 – 4.8	MAR 2024	NO	Corrosion of household plumbing
Copper (µg/L)	1300	16.3	1.5 – 42.6	MAR 2024	NO	Corrosion of household plumbing
Historic Data						
Lead and Copper (taken at 10 consumer taps)						
Lead (µg/L)	15	0.6	< 0.1 – 2.2	NOV 2023	NO	Corrosion of household plumbing
Copper (µg/L)	1300	14.6	< 3.0 – 16.2	NOV 2023	NO	Corrosion of household plumbing
Lead (µg/L)	15	1.3	<0.1 – 1.4	JUN 2023	NO	Corrosion of household plumbing
Copper (µg/L)	1300	8.3	< 1.0 – 13.8	JUN 2023	NO	Corrosion of household plumbing
Lead (µg/L)	15	8.2	0.9 – 39	SEP 2022	NO	Corrosion of household plumbing
Copper (µg/L)	1300	37.5	8.9 – 209	SEP 2022	NO	Corrosion of household plumbing
Lead (µg/L)	15	14.5	1.6 – 14.8	JUL 2022	NO	Corrosion of household plumbing
Copper (µg/L)	1300	87.1	7.0 – 98.5	JUL 2022	NO	Corrosion of household plumbing
Lead (µg/L)	15	25.2	1.2 – 37.9	JUN 2022	YES*	Corrosion of household plumbing
Copper (µg/L)	1300	90.3	24.4 – 99.8	JUN 2022	NO	Corrosion of household plumbing

* Drinking water samples were sampled for lead in unoccupied houses in June 2022 which conflicts with the recommended sampling locations in the NAS Sigonella sampling plan. Therefore additional samples were collected in July and September 2022. The additional samples were in compliance with the lead AL. Sampling continued to occur semi-annually through 2024 to ensure corrosion control measures remain effective. Complete results of individual units tested are available on <https://cnreura cent.cn ic.navy.mil/Installations/NAS-Sigonella/Operations-and-Management/Environmental-Support/>.

Table 3. Important Drinking Water Definitions

Term	Definition
AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

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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.
MRDLG	Maximum residual disinfection 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, also below the PQL
PQL	Practical Quantitation Limit, the lowest limit at which the contaminant can be detected reliably.
TT	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
Variances and Exemptions	EPA permission not to meet an MCL or a treatment technique under certain conditions.

Table 4. Unit Descriptions

<u>Term</u>	<u>Definition</u>
mg/L	milligrams per liter (mg/L) or parts per million
µg/L	micrograms per liter (µg/L) or parts per billion
ng/L	nanograms per liter (ng/L) or parts per trillion
NTU	Nephelometric Turbidity Units
pCi/L	picocuries per liter (a measure of radioactivity)
µS/cm	microsiemens per centimeter

Monitoring Discrepancies

This section includes Tier 3 notifications in accordance with EPA procedures. Tier 3 notifications do not have an impact on human health but are required by the EPA (See Table 1).

- **Pesticide / PCBs (Organic Chemicals):** NASSIG monitors the Pesticide/PCB chemical group on a quarterly basis at a frequency above the baseline frequency requirement. We were unable to accomplish sampling for a portion of this group during the third quarter of 2024, and the entire group during the fourth quarter, due to non-availability of laboratories validated by the Navy Lab Authority. Quarterly sampling with validated laboratories resumed in 2025.
- **Inorganic Compounds:** Iron must be monitored at Marinai because ferric chloride is used as a flocculent in the treatment process. Iron was measured at the required frequency, however analysis was not performed by a laboratory validated by the Navy Lab Authority. Bromate and Cyanide were analyzed in the fourth quarter of 2024 by a laboratory with methods that were not validated by the Navy Lab Authority, due to non-availability of laboratories with validation. The laboratories used for these chemicals is accredited for analysis in Italy.

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- Disinfection Byproducts: Samples were collected in 2024 for total trihalomethanes (TTHM) and haloacetic acids (HAA5) at one sampling location representing maximum residence time to meet the FGS requirements. However, the U.S. EPA specifies collection of TTHM and HAA5 samples from two separate locations. Samples will be collected from two locations beginning in 2025.

Points of Contact

If you have any questions regarding this report or about the drinking water processes, please contact the NAS Sigonella Installation Water Quality Board via the Installation Environmental Program Director by calling 095-86-2725.