



## NAVAL SUPPORT ACTIVITY BAHRAIN (NSA II, NSA III, BANZ) 2025 DRINKING WATER CONSUMER CONFIDENCE REPORT



### Is NSA II water safe to drink?

Yes, Naval Support Activity (NSA II, NSA III, BANZ) Bahrain's drinking water system provides water that is safe and fit for human consumption (FFHC). NSA II safe for drinking, cooking, bathing, showering, dishwashing, and maintaining oral hygiene, as determined by the Installation Commanding Officer's Record of Decision and as routinely confirmed by laboratory sampling results (received monthly, quarterly, and semi-annually). 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 includes general and mandatory information to educate everyone about installation water source, treatment processes, standard requirements, and other details to help assure you that installation water is safe to drink.

NSA II drinking water fully complies with the Department of Defense's (DoD) Bahrain Final Governing Standards (FGS), which are derived from the U.S. DoD Overseas Environmental Baseline Guidance Document (OEBGD), the U.S. Environmental Protection Agency (EPA), and Bahrain drinking water standards. When Bahrain 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 under these standards.

### Where does NSA II water come from, and how is it treated?

NSA II Bahrain purchases treated water from the Kingdom of Bahrain Electricity & Water Authority (EWA). The city water comes from the ocean and is treated at the Al Hidd Water Plant, a multi-stage flash distillation plant. Water received from the City of Manama Al Hidd Plant is further treated using Reverse Osmosis (RO) and approved process chemicals prior to purification. Disinfection of the water is achieved by chlorination. Potable water is stored in secured and controlled access tanks at the facility for direct distribution to various outlets throughout the NSA II water distribution network. NSA II water is trucked to BANZ above ground water tank (AST) since Apr 2022, expect BANZ Warehouse water 1,2, and 10 is connected to city line. NSA III aboveground water tank (AST) since May 2022, expect North Ramp water is connected to city line.

### Why are there contaminants in drinking water?

Drinking water, including bottled water, may reasonably be expected to contain small amounts of contaminants. NSA II drinking water source is distilled; however, distillation is not 100% effective in removing all contaminants because: 1) Droplets of un-vaporized liquid can be carried with the steam prior to distillation, and 2) Some contaminants have boiling points similar to that of water and will be vaporized and condensed with the distilled water.

Consequently, some contaminants may be present in drinking water, such as:

- **Microbial contaminants**, such as viruses and bacteria, that may come from wildlife, sewage treatment plants, septic systems, and livestock.
- **Disinfection by-products**, such as chlorine and chloramine used to remove pathogens from the water.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

- **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.
- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

The presence of contaminants does not necessarily indicate that water poses a health risk. 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 exceed regulatory limits, you will be notified via email and public notification. You can learn more about contaminants and any potential health effects by visiting the EPA's Drinking Water Standards website: <http://permanent.access.gpo.gov/lps21800/www.epa.gov/safewater/standards.html>

### Source water assessment

In September 2025, the Water Quality Oversight Council conducted a comprehensive sanitary survey of the NSA Bahrain drinking water system. This survey, conducted every three years, provides an evaluation of the adequacy of the drinking water source, facilities, equipment, operation, and maintenance for producing and distributing safe drinking water. Public Works Department (PWD) Bahrain is constantly improving the drinking water system based on the recommendations in the report.

### Special precautions

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as individuals undergoing chemotherapy, organ transplant recipients, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These individuals 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 website: <https://www.epa.gov/sdwa>

### Additional Information for Iron

Iron is regulated as a secondary contaminant by USEPA, because it may cause discolored water or aesthetic effects in drinking water, such as unpleasant odor or taste. Exceeding a secondary standard may cause people to stop using the water even though the water is actually safe to drink. Secondary standards are set to provide public water systems guidance on removing these chemicals to levels that are below what most people will find noticeable. Activities taken to reduce the iron concentration in NSA II drinking water include flushing the distribution system to remove settled particulates. Information on iron in drinking water and the steps you can take to minimize exposure is available from the USEPA Safe Drinking Water website: <https://www.epa.gov/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. PWD Bahrain is responsible for providing high-quality drinking water but cannot control the variety of materials used in plumbing components in the water system. NSA II shares the responsibility for protecting the installation from the lead in the distribution plumbing system. Consumers can take steps to reduce lead risk. Before drinking tap water, flush the pipes for several minutes by running the

tap, taking a shower, doing laundry or a load of dishes. Consumers can also use a water filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. Information on lead in drinking water and steps consumers can take to minimize exposure are available from the EPA Safe Drinking Water website: <http://www.epa.gov/safewater/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 service line inventory was completed in APR 2024. Table 1 below shows the summary of results of lead samples taken in 2025. You can obtain a copy of the lead service line inventory or individual tap results by contacting the Point of Contact at the end of this report.

**Table 1**

Contaminant	EPA's Action Level	EPA's MCLG (Goal)	Location	Your results	Range of results	Number of samples above AL	Typical Source
Lead	15ppb	Oppb	NSA II	N/D	<5	None	Corrosion of household plumbing
			NSA III	N/D	<5	None	Corrosion of household plumbing
			BANZ	N/D	<5	None	Corrosion of household plumbing
Copper	1.3ppm	1.3ppm	NSA II	0.098ppm	(0.006-0.104)	None	Corrosion of household plumbing
			NSA III	0.002ppm	(0.006-0.008)	None	Corrosion of household plumbing
			BANZ	0.032ppm	(0.004-0.036)	None	Corrosion of household plumbing

### Water Quality Data Table –NSA II

Table 2 below lists the drinking water contaminants and relevant sampling data collected during the 2025 calendar year (Unless otherwise noted). The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. All contaminants detected in NSA II drinking water are below the MCLs allowed by FGS, DoD, and EPA applicable requirements.

**Table 2**

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Your Water	Units	Sample Date	Violation	Typical Source
<b>Inorganic Components</b>							
Sodium	N/A	N/A	6.2	mg/L	25-JAN -2025	NO	Erosion of natural deposits; Leaching
Calcium	N/A	N/A	13	mg/L	28-JUL-2025	NO	Erosion of natural deposits; Leaching
Phosphate	N/A	N/A	0.68	mg/L	25-OCT-2025	NO	Agriculture runoff and municipal and waste water discharge

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Your Water	Units	Sample Date	Violation	Typical Source
<b>Inorganic Components</b>							
Conductivity	N/A	N/A	92	mS/cm	28-JUL-2025	NO	Dissolved minerals and salts
Total Alkalinity as CaCO <sub>3</sub>	N/A	N/A	39	mg/L	25-JAN-2025	NO	Natural weathering and dissolution of carbonate minerals
Total Dissolved Solids	N/A	500	49	mg/L	28-JUL-2025	NO	Natural geological processes and human activities
Total Hardness as CaCO <sub>3</sub>	N/A	N/A	33	mg/L	28-JUL-2025	NO	Dissolved calcium and magnesium ions.
Turbidity	N/A	0.5	0.1	NTU	25-OCT-2025	NO	Soil runoff
Residual Chlorine (Cl <sub>2</sub> )	4	4	1.05	mg/L	25-OCT-2025	NO	Water additive use to control microbes
Zinc	N/A	5	0.25	mg/L	25-JAN-2025	NO	Erosion of natural deposits; Leaching
pH@ 25°C	N/A	6.5-8.5	7.8	-	25-OCT-2025	NO	Runoff/leaching from natural deposits
Benzene	N/A	0.005	0.0009	mg/L	25-OCT-2025	NO	Byproduct of drinking water disinfection
Chlorides	N/A	N/A	4.8	mg/L	28-JUL-2025	NO	Discharge from factories; leaching from gas storage tanks and landfills
Toluene	0.00005	1.0	0.0005	mg/L	25-OCT-2025	NO	Discharge from petroleum factories; discharge from chemical factories
Cis-1,3-dichloropropene	0.00005	N/A	0.001	mg/L	25-OCT-2025	NO	Discharge from petroleum factories; discharge from chemical factories
O-Xylene	0.7	N/A	0.001	mg/L	25-OCT-2025	NO	Discharge from petroleum factories; discharge from chemical factories
<b>Note: All other Inorganic Compounds, Organic Compounds, Pesticides, PCBs, Total Trihalomethanes, Radionuclides, Lead, Copper and Total Coliforms were not detected.</b>							

**Table 3**

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Level Detected (Average)	Range of Detections	Violation	Typical Source
<b>Disinfectant Residual and Disinfectant By-Products</b>						
Chlorine (ppm)	4.0	4.0	1.035	1.02-1.05	NO	Drinking water disinfectant added for treatment

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Level Detected (Average)	Range of Detections	Violation	Typical Source
<b>Disinfectant Residual and Disinfectant By-Products</b>						
Total Trihalomethanes (TTHM; ppb)	N/A	80	22	9-30	NO	By-products of drinking water disinfectant
Halo acetic Acids (HAAs; ppb)	N/A	60	29	9-54	NO	By-products of drinking water disinfectant

**Table 4**

Term	Definition
mg/L	ppm: parts per million, or milligrams per liter (mg/L)
N/A	not applicable
N/D	Not detected N/D= Not Detected, i.e. below PQL PQL= Practical Quantitation Limit of the best method
CFU	Colony Forming Unit
NTU	Nephelometric Turbidity Unit
ppt	Parts per trillion

**INFORMATION ON ADDITIONAL FACILITIES MANAGED BY NSA:**

**NSA III (AV UNIT):**

The NSA III (Aviation Unit), also formally referred to as “Air Logistics Department”, is located next to the Bahrain International Airport. The unit includes active duty military, military reservists, DOD civilians, and local national civilians. A project to haul water FFHC from NSA II treatment plant and stored in several new Aboveground Storage Tanks (AST) throughout the AV Unit was completed in May 2022. FFHC water was transported by a 17,000-liter (4,500-gallon) truck to the AV Unit and transferred into the following tanks, each accompanied by a new pump station:

- 20,000-liter (5,000-gallon) FRP AST serving Buildings 460, 466R, and 471R
- 20,000-liter (5,000-gallon) FRP AST serving Buildings 480 and 461R
- 20,000-liter (5,000-gallon) FRP AST serving the ablution units located near the main gate
- 12,000-liter (3,000-gallon) FRP AST serving Building 479
- 12,000-liter (3,000-gallon) FRP AST serving Building 475R
- 1,000-liter (250-gallon) AST serving the eyewash station near Building 483
- 3,000-liter (800-gallon) AST serving Buildings 469 and 472R

**Water Quality Data Table – NSA III (AV Unit)**

Table 4 below lists the drinking water contaminants and relevant sampling data collected during the 2025 calendar year (Unless otherwise noted). The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. All contaminants detected in NSA III AV Unit drinking water are below the MCLs allowed by FGS, DoD, and EPA applicable requirements.

**Table 5**

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Your Water	Units	Sample Date	Violation	Typical Source
<b>Inorganic Components</b>							
Sodium	N/A	N/A	6.2	mg/L	25-JAN -2025	NO	Erosion of natural deposits; Leaching
Calcium	N/A	N/A	13	mg/L	26-APR-2025	NO	Erosion of natural deposits; Leaching
Phosphate	N/A	N/A	0.62	mg/L	25-JAN-2025	NO	Agriculture runoff and municipal and waste water discharge
Chlorides	N/A	N/A	5.1	mg/L	29-JUL -2025	NO	Erosion of natural deposits; Leaching
Conductivity	N/A	N/A	95	mS/cm	29-JUL-2025	NO	Dissolved minerals and salts
Total Alkalinity as CaCO <sub>3</sub>	N/A	N/A	40	mg/L	25-JAN-2025	NO	Natural weathering and dissolution of carbonate minerals
Total Dissolved Solids	N/A	500	51	mg/L	29-JUL-2025	NO	Natural geological processes and human activities
Total Hardness as CaCO <sub>3</sub>	N/A	N/A	35	mg/L	29-JUL-2025	NO	Dissolved calcium and magnesium ions.
Turbidity	N/A	0.5	0.25	NTU	29-JUL-2025	NO	Soil runoff
Residual Chlorine (Cl <sub>2</sub> )	4	4	1.05	mg/L	27-OCT-2025	NO	Water additive use to control microbes
Zinc	N/A	5	0.34	mg/L	25-JAN-2025	NO	Erosion of natural deposits; Leaching
pH@ 25°C	N/A	6.5-8.5	8.0	-	26-APR-2025	NO	Runoff/leaching from natural deposits
Trans-1,2-Dichloroethylene	N/A	0.1	0.003	mg/L	27-OCT-2025	NO	Discharge from petroleum factories; discharge from chemical factories
1,2-Dichloropropane	N/A	0.005	0.004	mg/L	27-OCT-2025	NO	Discharge from petroleum factories; discharge from chemical factories
Toluene	0.00005	1.0	0.0008	mg/L	27-OCT-2025	NO	Discharge from petroleum factories; discharge from chemical factories
Cis-1,3-dichloropropene	0.00005	N/A	0.0012	mg/L	27-OCT-2025	NO	Discharge from petroleum factories; discharge from chemical factories
O-Xylene	0.7	N/A	0.001	mg/L	27-OCT-2025	NO	Discharge from petroleum factories; discharge from chemical factories
<b>Note: All other Inorganic Compounds, Organic Compounds, Pesticides, PCBs, Radionuclides, and Total Coliforms were not detected.</b>							

**Table 6**

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Level Detected (Average)	Range of Detections	Violation	Typical Source
<b>Disinfectant Residual and Disinfectant By-Products</b>						
Chlorine (ppm)	4.0	4.0	0.98	0.93-1.05	NO	Drinking water disinfectant added for treatment
Total Trihalomethanes (TTHM; ppb)	N/A	80	19	16-22	NO	By-products of drinking water disinfectant
Halo acetic Acids (HAA; ppb)	N/A	60	27	23-31	NO	By-products of drinking water disinfectant

**Table 7**

Term	Definition
mg/L	ppm: parts per million, or milligrams per liter (mg/L)
N/A	not applicable
N/D	Not detected N/D= Not Detected, i.e. below PQL PQL= Practical Quantitation Limit of the best method
CFU Index/100mL	Colony Forming Unit
NTU	Nephelometric Turbidity Unit
ppt	Parts per trillion

## **BANZ Warehouses**

The BANZ warehouse is a Navy leased facility owned and operated by BANZ Group B.S.C. It is located just southwest of NSA I. A project to haul FFHC water from the NSA II water treatment plant to the BANZ Warehouse area was completed in Apr 2022. FFHC water was transported by a 17,000-liter (4,500-gallon) truck to the BANZ Warehouse area and transferred into the following tanks, each accompanied by a new pump station:

- Ten (10) small (1000-liter (250-gallon] or less) FRP ASTs serving Building 420
- 2,000-liter (500-gallon) FRP AST serving ablution units located on the north-east side of Building 420
- 2,000-liter (500-gallon) FRP AST serving Building 421
- Two 2,000-liter (500-gallon) FRP ASTs serving Building 422
- 2,000-liter (500-gallon) FRP AST serving Warehouse 3
- Two 2,000-liter (500-gallon) FRP ASTs serving Warehouse 4
- 2,000-liter (500-gallon) FRP AST serving Warehouse 5
- One 10,000-liter (2,500-gallon) FRP AST and one 2,000-liter (500-gallon) FRP AST serving Warehouse 6
- 2,000-liter (500-gallon) FRP AST serving Warehouse 7
- 2,000-liter (500-gallon) FRP AST serving Warehouse 8
- One 12,000-liter (3,000-gallon) FRP AST and three 2,000-liter (500-gallon) FRP ASTs serving Warehouse 12

## Water Quality Data Table – BANZ Area

Table 6 below lists the water contaminants and relevant sampling data collected during the 2025 calendar year (Unless otherwise noted). The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. All contaminants detected in the BANZ area drinking water are below the MCLs allowed by the FGS, DoD, and EPA applicable requirements.

**Table 8**

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Your Water	Units	Sample Date	Violation	Typical Source
<b>Inorganic Components</b>							
Sodium	N/A	N/A	6.2	mg/L	28-JUL -2025	NO	Erosion of natural deposits; Leaching
Calcium	N/A	N/A	14	mg/L	28-JUL -2025	NO	Erosion of natural deposits; Leaching
Phosphate	N/A	N/A	0.65	mg/L	25-OCT-2025	NO	Agriculture runoff and municipal and waste water discharge
Chlorides	N/A	N/A	5	mg/L	28-JUL -2025	NO	Erosion of natural deposits; Leaching
Conductivity	N/A	N/A	94	mS/cm	28-JUL-2025	NO	Dissolved minerals and salts
Total Alkalinity as CaCO <sub>3</sub>	N/A	N/A	38	mg/L	28-JUL-2025	NO	Natural weathering and dissolution of carbonate minerals
Total Dissolved Solids	N/A	500	50	mg/L	28-JUL-2025	NO	Natural geological processes and human activities
Total Hardness as CaCO <sub>3</sub>	N/A	N/A	35	mg/L	28-JUL-2025	NO	Dissolved calcium and magnesium ions.
Turbidity	N/A	0.5	0.20	NTU	25-JAN-2025	NO	Soil runoff
Residual Chlorine (Cl <sub>2</sub> )	4	4	0.99	mg/L	25-OCT-2025	NO	Water additive use to control microbes
Zinc	N/A	5	0.23	mg/L	25-JAN-2025	NO	Erosion of natural deposits; Leaching
pH@ 25°C	N/A	6.5-8.5	7.9	-	25-JAN-2025	NO	Runoff/leaching from natural deposits
Trans-1,2-Dichloroethylene	N/A	0.1	0.003	mg/L	27-OCT-2025	NO	Discharge from petroleum factories; discharge from chemical factories
1,2-Dichloropropane	N/A	0.005	0.004	mg/L	25-OCT-2025	NO	Discharge from petroleum factories; discharge from chemical factories
Toluene	0.00005	1.0	0.0007	mg/L	25-OCT-2025	NO	Discharge from petroleum factories; discharge from chemical factories
Cis-1,3-dichloropropene	0.00005	N/A	0.0011	mg/L	25-OCT-2025	NO	Discharge from petroleum factories; discharge from chemical factories

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Your Water	Units	Sample Date	Violation	Typical Source
<b>Inorganic Components</b>							
O-Xylene	0.7	N/A	0.001	mg/L	25-OCT-2025	NO	Discharge from petroleum factories; discharge from chemical factories
<b>Note: All other Inorganic Compounds, Organic Compounds, Pesticides, PCBs, Radionuclides, and Total Coliforms were not detected.</b>							

**Table 9**

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Level Detected (Average)	Range of Detections	Violation	Typical Source
<b>Disinfectant Residual and Disinfectant By-Products</b>						
Chlorine (ppm)	4.0	4.0	0.96	0.92-0.99	NO	Drinking water disinfectant added for treatment
Total Trihalomethanes (TTHM; ppb)	N/A	80	16.75	9-21	NO	By-products of drinking water disinfectant
Halo acetic Acids (HAA; ppb)	N/A	60	22	21-23	NO	By-products of drinking water disinfectant

**Table 10**

Term	Definition
mg/L	ppm: parts per million, or milligrams per liter (mg/L)
N/A	not applicable
N/D	Not detected N/D= Not Detected, i.e. below PQL PQL= Practical Quantitation Limit of the best method
NTU	Nephelometric Turbidity Unit
ppb	Parts per billion
ppt	Parts per trillion

**Table 11**

<b>Important Drinking Water Definitions</b>	
Term	Definition
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.

TT	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
Variances and Exemptions	Variances and Exemptions. EPA permission not to meet an MCL or a treatment technique under certain conditions.
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.
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.
Action Level (AL)	The concentration of contamination, which, if exceeded triggers treatment or other requirements that water system must follow.

### Violation(s) or Exceedance(s)/MISSED SAMPLING EVENTS:

In 3<sup>rd</sup> and 4<sup>th</sup> quarter 2025, we failed to sample for Herbicide (2,4,5-TP Silvex), 2,4-D, Dalapon, Dinoseb and Picloram on time. These sampling events were missed in due to commercial shipment delays leading to holding time and temperature exceedances. There were no violations or MCL exceedances during 2025 for any test parameters at NSA -II, III & BANZ.

### Points of Contact

For questions regarding this report or drinking water processes, please contact:

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**A copy of this CCR and previous year reports are available at:**  
**<https://cnreurfcent.cniv.navy.mil/Operations-and-Management/Water-Quality-Information/>**