



# NSF DEVESELU 2016 DRINKING WATER CONSUMER CONFIDENCE REPORT



## About this Report

This Consumer Confidence Report (CCR) is prepared in accordance with the Overseas Environmental Baseline Guidance Document, and CNIC policy Instructions 5090.1, 5090.2, and 5090.3. This CCR provides valuable information on water quality and supports the Navy's commitment to provide high quality drinking water to our service members, their families, local installation staff, and other DoD personnel. Presented in this report is information regarding the source of our water, its constituents and the health risks associated with any contaminants detected in quantities exceeding a drinking water regulatory maximum contaminant level (MCL) or an action level (AL) during the calendar year 2016.

## Is our water safe to drink?

NSF Deveselu's drinking water system provides water that is safe and Fit For Human Consumption (potable) as determined by the Installation Commanding Officer's Record of Decision dated September 09, 2014 for the Navy Support Area, October 18, 2014 for the Missile Defense Agency (MDA) side of the S.A. (both now referred to as the Site Activation Area or SAA), and March 04, 2016 for the Main Base.

Our drinking water fully complies with the Overseas Environmental Baseline Guidance Document (OEBGD). 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. In this reporting year there was one exceedance of a contaminant which will be explained below.

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

NSF Deveselu provides treated groundwater supplied by three deep wells, one for the SAA and two for the Main Base. Source water is treated near the well head by disinfection at both sites with sodium hypochlorite prior to distribution. Additional information about the source water is available from Mr. Michael Murray, Installation Environmental Program Director, Public Works Office at DSN 324-770-0069 and commercial number +40 349 080 069.

## 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. The presence of contaminants does not necessarily indicate that water poses a health risk. 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). 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.

Due to this, contaminants may be present in the source of drinking water, to include:

- **Microbial contaminants**, such as viruses and bacteria, that may come from wildlife, sewage treatment plants, septic systems, and livestock;

- **Disinfection by-products**, such as trihalomethanes (TTHM) that are byproducts of chlorinating water that contains natural organics. Some people who drink TTHM in excess of the maximum contaminant level (MCL) over many years may experience liver, kidney, or central nervous system problems, and may have an increased cancer risk;
- **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 or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the Navy follows regulations that limit the amount of certain contaminants in water provided by public water systems. The OEBGD and CNICINST 5090.1 mandate that those limitations are met in our Overseas Drinking Water System which is based on USEPA regulations. 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 by the Public Works Director and the Installation Environmental Program Manager, who are members of the Installation Water Quality Board (IWQB). A Boil Water Notification or other Important Information about your Drinking Water service will be issued by the IWQB and will be posted at all affected buildings and communicated to all hands by email. You can learn more about contaminants and potential health effects by visiting the Environmental Protection Agency (EPA) Drinking Water Standards web site: <http://permanent.access.gpo.gov/lps21800/www.epa.gov/safewater/standards.html>.

### Source water assessment

A comprehensive sanitary survey of the NSF Deveselu drinking water system was conducted in October 2016. The survey provided an evaluation of the adequacy of the drinking water source, facilities, equipment, operation and maintenance for producing and distributing safe drinking water. Findings indicated some deficiencies which are currently being corrected; however, the drinking water supply is still “Fit for Human Consumption”.

### 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 MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

USEPA/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 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. During and following construction of NSF Deveselu, lead swab testing was conducted on randomly selected portions of the water distribution system. Given this testing was random and not a 100% testing procedure, NSF Deveselu PWD cannot absolutely verify that no lead materials were used. Given this, if your water has been stagnant (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. 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).

## Water Quality Data Table

The table below lists all of the drinking water contaminants and relevant sampling data collected during the 2016 calendar year (unless otherwise noted<sup>1</sup>). The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. In December 2016, copper was detected above the MCL at two locations on the Main Base. All other contaminants detected in NSF Deveselu's drinking water were reported below allowed levels and meet EPA and OEBGD requirements.

**Table 1. Site Activation Area Results**

<u>Parameter</u>	<u>Units</u>	<u>OEBGD MCL</u>	<u>Concentration</u>	<u>Testing Frequency</u>	<u>Violation</u>	<u>Typical Source</u>
TTHMs (total Trihalomethanes)	ppb	0.080	0.035	Quarterly	No	By-product of drinking water disinfection.
Arsenic	ppm	0.010	0.006	Annually	No	Erosion of natural deposits.
Barium	ppm	2.0	0.07	Annually	No	Erosion of natural deposits.
Dalapon	ppm	0.2	0.004	Annually	No	Erosion of natural deposits.
HAA5 (Halo acetic acids)	ppm	0.06	0.0198	Annually	No	By-product of drinking water disinfection.
Dichloromethane	ppb	0.005	0.005	Quarterly	No	By-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

Sodium	ppm	N/A	97.7	Quarterly	No	Erosion of natural deposits, leaching	
Bromate	ppb	N/A	2.6	Quarterly	No	By-product of drinking water disinfection.	
Fluoride	ppm	4.0	0.1	Quarterly	No	Erosion of natural deposits leaching	
Nitrate/Nitrite (as Nitrogen)	ppm	10	0.3	Quarterly	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	
<b><u>Parameter</u></b>	<b><u>OEBGD AL</u></b>	<b><u>units</u></b>	<b><u>90<sup>th</sup> percentile</u></b>	<b><u>Sample Date<sup>1</sup></u></b>	<b><u>Samples Exceeding AL</u></b>	<b><u>Violation</u></b>	<b><u>Typical Source</u></b>
Copper – action level at consumer taps	1.3	ppm	0.0351	Dec 2016	0	No	Corrosion of household plumbing systems.
Lead – action level at consumer taps	0.015	ppm	.0007	Dec 2016	0	No	Corrosion of household plumbing systems.

**Table 2. Main Base Results**

<b><u>Parameter</u></b>	<b><u>units</u></b>	<b><u>OEBGD MCL</u></b>	<b><u>Concentration</u></b>	<b><u>Testing Frequency<sup>1</sup></u></b>	<b><u>Violation</u></b>	<b><u>Typical Source</u></b>
TTHMs (total trihalomethanes)	ppm	0.04	0.00869	Quarterly	No	By-product of drinking water disinfection.
HAA5 (haloacetic acids)	ppm	0.06	0.0198	Annually	No	By-product of drinking water disinfection.
Arsenic	ppm	0.01	0.007	Annually	No	Erosion of natural deposits.
Barium	ppm	2.0	0.09	Annually	No	Erosion of natural deposits.
Dalapon	ppm	0.002	0.004	Quarterly	No	By-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems
Sodium	ppm	NA	140	Annually	No	Erosion of natural deposits,

						leaching.
Fluoride	ppm	4.0	0.1	Annually	No	Erosion of natural deposits, leaching.
Methylene chloride	ppm	0.005	0.0006	Quarterly	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.

<sup>1</sup> Testing at the Main Base formally began in September 2015 so these results represent an eight quarter.

<u>Parameter</u>	<u>OEBGD AL</u>	<u>units</u>	<u>90<sup>th</sup> percentile</u>	<u>Sample Date<sup>1</sup></u>	<u>Samples Exceeding AL</u>	<u>Violation</u>	<u>Typical Source</u>
Copper – action level at consumer taps	1.3	ppm	3.3 and 1.4	Dec 2016	2	Yes	Corrosion of household plumbing systems.
Lead – action level at consumer taps	0.015	ppm	0.0024	Dec 2016	0	No	Corrosion of household plumbing systems.

<u>Unit Descriptions</u>	
<u>Term</u>	<u>Definition</u>
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)
N/A	N/A: not applicable

<b>Important Drinking Water Definitions</b>	
<b>Term</b>	<b>Definition</b>
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements.
MCL	MCL: Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water.
MCLG	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.
MNR	MNR: Monitored Not Regulated.
MPL	MPL: State Assigned Maximum Permissible Level
MRDL	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	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.
TT	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.

**VIOLATIONS, EXCEEDANCES, or MISSED SAMPLING EVENTS:**

NSF Deveselu had one violation reported in December 2016 due to exceedance of the MCL for Copper. The sites where copper exceeded the MCL were immediately re-sampled and the results were reported below the MCL. NSF Deveselu Installation Environmental Program Director and PWO believed this was due to a sampling error.

**Points of Contact**

This Consumer Confidence Report is required by CNIC Instruction 5090.1

For more information, please contact the Installation Environmental Program Director at Public Works Office who is a member of the Installation Water Quality Board. Contact information below:

Michael Murray DSN 324 770-0069, Cell +40 786 957 650, e-mail [michael.murray@eu.navy.mil](mailto:michael.murray@eu.navy.mil).

In his absence, contact the Environmental Technician, Mr. Florin Buse, [florentin.buse@b3globalcon.eu](mailto:florentin.buse@b3globalcon.eu) DSN 324-770-0069.