

Annual Consumer Confidence Report on the Quality of Drinking Water

U. S. Naval Station, Guantanamo Bay
Reporting Year 2013

• What is the purpose of this report?

This is an annual report on the quality of water delivered by the U. S. Naval Station, Guantanamo Bay (GTMO). The annual report was required when Congress amended the Safe Drinking Water Act (SDWA) in 1996. The SDWA added a provision requiring all community water systems to deliver a brief annual water quality report to their customers. Included in this report is pertinent information about the source of our water, any contaminants detected and possible sources of contaminants for the calendar year

• What is the source of our water and the basic treatment process?

Our raw water supply is drawn from Guantanamo Bay, approximately 160 feet north of the DESAL Water & Power Plant Compound. Our “source water” is seawater from the bay. Seawater is made into drinking water through a process called “reverse osmosis”. A textbook definition of reverse osmosis (RO) is: The application of pressure to a concentrated solution that causes the passage of a liquid from the concentrated solution to a weaker solution across a semi-permeable membrane. The membrane allows the passage of water (solvent); but does not allow the passage of the dissolved solids (solutes). The RO plant is currently capable of making about 1.6 million gallons of freshwater per day. Water produced from the RO plant is transferred to water storage tanks before being processed at the water treatment plant on Skyline Drive (WTP3). At the treatment plant, water is stored in tanks before entering the distribution system eventually ending up at your house or workplace.

• Is our water system meeting the rules that govern our operations?

The quality of drinking water at GTMO is in compliance with the Overseas Environmental Baseline Guidance Document (OEBGD). The OEBGD establishes monitoring frequencies and recordkeeping requirements for possible contaminants based on the SDWA. We are in compliance with the OEBGD.

• How can I get involved?

If you have any questions about the quality of water at GTMO or would like more information on the Drinking Water Program at GTMO; please contact Public Works Environmental Office at 5627 or 5623.

• Do I need to take any special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons (such as those 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.

• Are there contaminants in my drinking water and why?

Drinking water (including bottled water) may reasonably be expected to contain small amounts of contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk.

Contaminants that may be present in source waters include:

Microbial Contaminants: such as viruses and bacteria that may come from sewage treatment plants, agricultural livestock operations and naturally from marine and terrestrial wildlife.

Inorganic Contaminants: such as fertilizers and heavy metals that can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, agricultural activities and dumping hazmat down storm drains.

Pesticide & Herbicide Contaminants: may come from a variety of sources such as agricultural stormwater runoff and residential uses.

Organic Chemical Contaminants: may include synthetic and volatile organic chemicals that may be by-products of industrial processes or petroleum use/spills; can also come from gas station spills, urban stormwater runoff, water treatment process itself and improper management of hazardous materials.

Radioactive Contaminants: can be naturally occurring or be the result of oil and gas production and mining activities.

Turbidity: can be naturally occurring however since we produce our water from seawater RO turbidity is used as an indicator of filtering efficiency

• **Glossary:** The definitions and abbreviations below give a better understanding to the meaning of terms and abbreviations concerning contaminants found in our drinking water as indicated in the table on the next page.

- AL: Action Level. The concentration of a contaminant (if exceeded) will trigger further treatment or other procedures that the water system must follow to lower the level.

- MCL: Maximum (allowable) Contaminant Level. The highest level of a contaminant that is allowed in drinking water (by regulation).

- MCLG: Maximum Contaminant Level Goal. The level of a contaminant in drinking water below which there is no known or expected risk to health.

- mg/L: milligrams per liter. Equivalent to parts per million.

- ND: Not detectable. A value below the detectable limit by the lab test procedure.

- NPDWR: National Primary Drinking Water Regulations: legally enforceable standards that apply to public water supply systems. Primary standards aim at protecting drinking water quality by setting limits on the levels of specific contaminants that can adversely affect public health and are known or anticipated to occur in public water systems.

- NSDWR: National Secondary Drinking Water Regulations: non-enforceable guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water. EPA recommends

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secondary standards for water systems but does not require systems to meet secondary standards.

- NTU: Nephelometric Turbidity Units -- a measure of the clarity of water. Turbidity is measured with an instrument which measures the intensity of light scattered by suspended matter in the water. Turbidity is used as a measure of filtration effectiveness.

Contaminant	Sampling Site	Units	MCL or Highest Level Allowed	Level Detected (or Range of Detections)	Violations (Y/N)	Typical Source of Contaminant
1. NPDWR (enforceable)						
A. ORGANICS						
Total Trihalomethanes (TTHM's)	AV-526 LP BEQ	mg/L	0.080	0.027-0.059	No	by-product of disinfection by chlorination
Halo Acetic Acid 5 (HAA5)	Residential Units: See list below***	mg/L	0.060	0.005-0.008	No	by-product of disinfection by chlorination
B. INORGANICS						
Copper	Residential Units: See list below***	mg/L	AL=1.3	0.00-0.150	No	corrosion of plumbing; erosion of natural deposits
Lead	Residential Units: See list below ***	mg/L	AL=0.015	0.000-0.009	No	corrosion of plumbing; erosion of natural deposits
Fluoride	Water Plant #3 Bldg 815	mg/L	4	0.30 – 1.65	No	water treatment additive which promotes strong teeth; erosion of natural deposits
Nitrate	Water Plant #3 Bldg 815	mg/L	10	ND	No	run-off from fertilizer use; erosion of natural deposits
C. MICROBIALS						
Total Coliform	Residential Units: See list below***	number of positive samples	1 positive sample/ 40 tests	0	No	naturally present in the environment; indicator species for fecal waste
Turbidity	Water Plant #3 Bldg 815	NTU	1	0.00 – 0.8	No	breakdown of natural minerals and deposits; indicator of filter efficiency
Turbidity (from Apr 2013 – Dec 2013)	Water Plant #3 Bldg 815	NTU	95% of monthly samples less than 0.3	100%	No	*

* January through April 2013 turbidity sampling location was not in the proper location. Although our daily readings were in full compliance of the requirements (OEBGD), the monthly averages exceeded 0.3 NTU in more than 5% of the readings. Relocation of sample point just after the filter showed that our filter performance was in full compliance with the OEBGD.

2. NSDWR (recommended / non-enforceable)						
Contaminant	Sampling Site	Units	MCL or Highest Level Allowed	Level Detected (or Range of Detections)	Violations (Y/N)	Typical Source of Contaminant
Sodium	Water Plant #3 Bldg 815	mg/L	250	110	n/a	breakdown of natural minerals and deposits
Chlorides	Water Plant #3 Bldg 815	mg/L	250	120 - 245	n/a	breakdown of natural minerals and deposits
Iron	Water Plant #3 Bldg 815	mg/L	0.3	0.00 - 0.07	n/a	water distribution pipe corrosion
Sulfate	Water Plant #3 Bldg 815	mg/L	250	0 – 9.00	n/a	run-off from fertilizer use; erosion of natural deposits
Total Dissolved Solids	Water Plant #3 Bldg 815	mg/L	500	238 - 438	n/a	breakdown of natural minerals and deposits