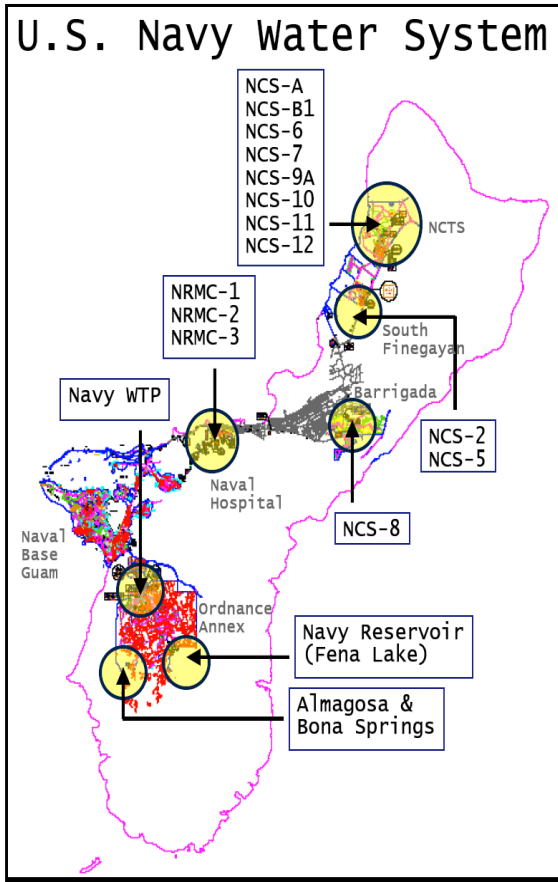


## How Can You Report a Water Quality Complaint?

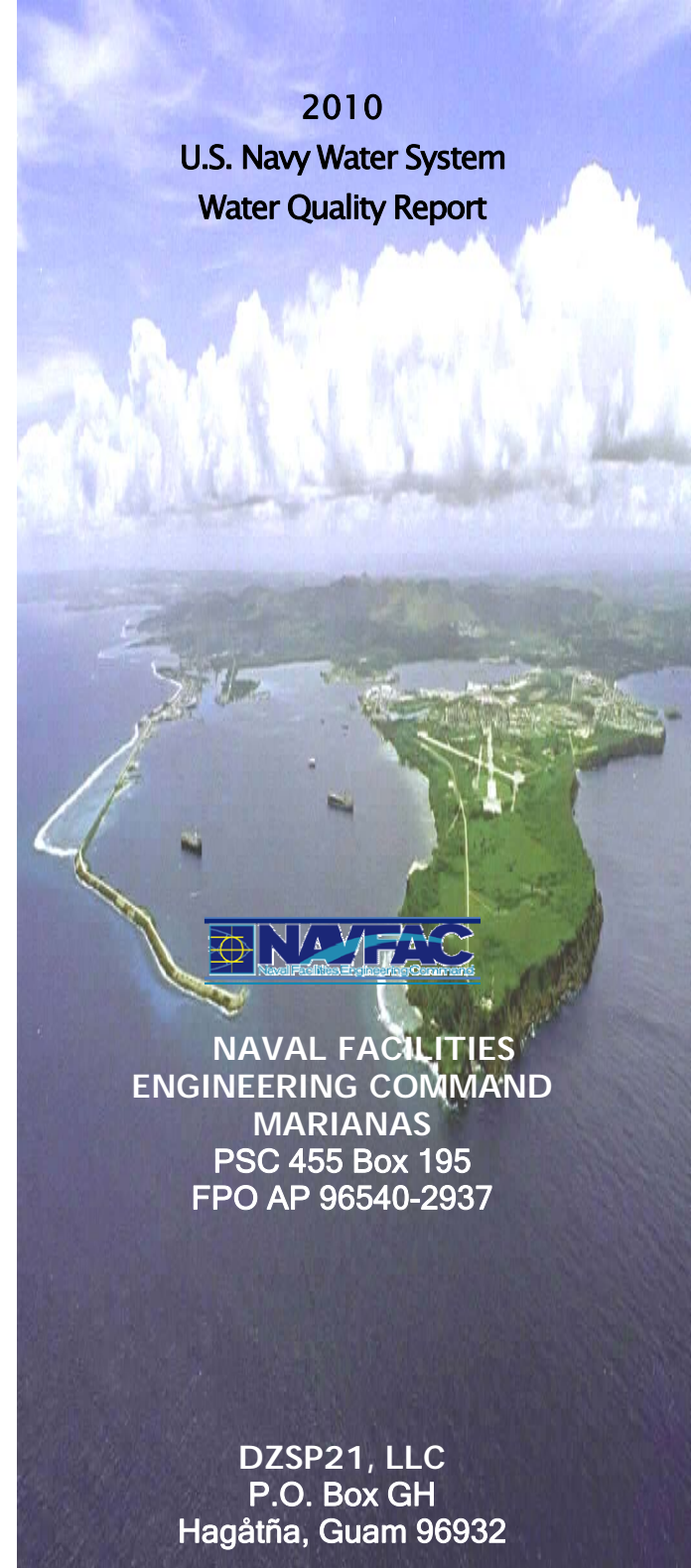
Should you notice that your water is discolored, or if you have any concerns about your drinking water, we strongly encourage you to call our **Service Support Center Trouble Desk** at **333-2011**. Arrangements can be made to have your water sampled and analyzed to ensure that it is safe to drink.

## How Can You Obtain Additional Information?

For additional information about the U.S. Navy Water System or this report, please feel free to call the DZSP21 Environmental Compliance Office at **(671) 339-8023**, the Naval Facilities Engineering Command Marianas Environmental Services Department at **(671) 339-4100**, or the Guam EPA Safe Drinking Water Program at **(671) 475-1660/1**.



DEPARTMENT OF THE NAVY  
 U.S. Naval Base Guam  
 Navy Housing Office  
 PSC 455, Box 50  
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This annual report contains information about the quality of the water supplied by the U.S. Navy Water System during the period of January 1 to December 31, 2010. Included as part of this report is a table entitled **"2010 U.S. Navy Water Quality Data"**, which provides details on the water quality of our system.

This report will help you, our customer, understand the relationship between the contaminants found in drinking water, activities that may contaminate the water supply, and their associated health effects.

## The U.S. Navy Water System



The Naval Facilities Engineering Command Marianas operates the U.S. Navy Water System with support provided by our Base Operations Support contractor, DZSP21, LLC.

The primary source of water for the Navy Water System is the Fena Reservoir. It is supplemented by the Almagosa and Bona Springs and is processed at the Navy Water Treatment Plant prior to distribution.

Groundwater wells from Naval Hospital, Barrigada, and Finegayan further augment our water system.

## Why are contaminants found in my water ?

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water moves over land or 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. Contaminants that may be present in untreated water include:

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

- *Inorganic contaminants*, such as 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;
- *Radioactive contaminants*, which can be naturally occurring or be the result of oil and gas production and mining activities;
- *Organic chemical contaminants*, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can come from gas stations, urban stormwater runoff, and septic systems.



In order to ensure that tap water is safe to drink, EPA created regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling EPA's Safe Drinking Water Hotline (1-800-426-4791).

## Monitoring, Reporting and Violations

The *National Primary Drinking Water Regulations* set limits for contaminants in drinking water and standards for water treatment that primarily safeguard health. These regulations also requires us to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards.

In 2010 the Navy Water System met all primary drinking water quality standards. We are proud to report that we did not violate any Maximum Contaminant Level (MCL) and Treatment Technique (TT) requirements. We also submitted all of our laboratory reports on time as required by Guam EPA. The Navy Water System have also completed all monitoring requirements includ-

ing the Second Cycle of the Unregulated Contaminants Monitoring Rule (UCMR2).

EPA uses the UCMR program to collect data for those contaminants suspected to be present in drinking water that do not have established health-based national standard under the Safe Drinking Water Act. These data will be stored in the National Drinking Water Contaminant Occurrence Database and may be used in the development of a candidate contaminant list and ultimately supports EPA regulatory determination.

Laboratory results of our UCMR2 monitoring can be obtained at DZSP21 Environmental Compliance Office (339-8023) and NAVFACMAR Environmental Compliance Department (339-4100)

## Health Precautions

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as cancer patients 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. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800) 426-4791.



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. The Naval Facilities Engineering Command Marianas is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components.

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 <http://www.epa.gov/safewater/lead>.

# 2010 U.S. Navy Water Quality Data

## DEFINITIONS:

1. Action Level (AL) - The concentration of a contaminants which, when exceeded, triggers treatment or other requirements which a water system must follow.
2. Maximum Contaminant Level (MCL) - The highest level of a contaminant allowed in drinking water; MCLs are set as close to the MCLGs as feasible using the best treatment technology.
3. Maximum Contaminant Level Goal (MCLG) - 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.
4. Maximum Residual Disinfectant Level (MRDL) - The level of a disinfectant that may not be exceeded at the consumer's tap without an unacceptable possibility of adverse health effects.
5. Maximum Residual Disinfectant Level Goal (MRDLG) - The maximum level of a disinfectant added for water treatment at which no known or anticipated adverse health effect would occur; MRDLGs allow for a margin of safety.
6. Treatment Technique (TT) - A required process intended to reduce the level of a contaminant in drinking water.

## ABBREVIATIONS:

NTU - Nephelometric Turbidity Units  
 n/a - not applicable  
 nd - not detected  
 ppb - parts per billion or micrograms per liter  
 ppm - parts per million or milligrams per liter  
 pCi/L - picocuries per liter

The data presented in the table below is from our monitoring conducted for the calendar year of this report, unless otherwise specified. GEPA allows us to monitor for some contaminants less than once a year as the concentration of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

### I. PRIMARY STANDARDS, Mandatory, Health-Related Standards, established by GEPA/USEPA

Contaminant	Sample Date	MCL	MCLG	Your Sample	Range Low	High	Violation	Major Source of Contamination	Locations Detected
<b>Inorganic Compounds</b>									
Fluoride (ppm)	3/1/2010	4	4	0.75	nd	0.75	No	Erosion of natural deposits; water additives which promotes strong teeth; discharge from fertilizer and aluminum factories	NWTP Clearwell
Nitrate (ppm)	6/14/2010	10	10	2.21	0.0395	2.21	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	NWTP clearwell, Wells NCS-6, NCS-7, NCS-9A, NCS-10, NCS-11, NCS-12, NRMCM-1, NRMCM-2
<b>Radionuclides</b>									
Alpha emitters (pCi/L)	2009	15	0	8.3	nd	8.3	No	Erosion of natural deposits of certain minerals that are radioactive and may emit a form of radiation known as alpha radiation	NWTP clearwell, Wells NCS-6, NCS-7, NCS-9A, NCS-10, NCS-11, NRMCM-2
Radium-226 (pCi/L)	2009	5 (Note 1)	0 (Note 1)	2.01	0.238	2.01	No	Erosion of natural deposits	NWTP clearwell, Wells NCS-A/B1, NCS-6, NCS-7, NCS-9A, NCS-10, NCS-11, NCS-12, NRMCM-1, NRMCM-2
Radium-228 (pCi/L)	2009	5 (Note 1)	0 (Note 1)	1.3	nd	1.3	No	Erosion of natural deposits	Wells NCS-A/B1, NCS-6, NCS-7, NCS-10, NCS-11, NCS-12, NRMCM-1
<b>Disinfectant and Disinfection Byproducts (DBPs)</b>									
Haloacetic Acids (HAA5) (ppb)	2010	60	n/a (Note 2)	53 (Note 3)	nd	89.5	No	Byproduct of drinking water chlorination	Distribution system
Total Trihalomethanes (TTHM) (ppb)	2010	80	n/a (Note 2)	59 (Note 3)	nd	112	No	Byproduct of drinking water chlorination	Distribution system
Chlorine (ppm)	2010	4 (MRDL)	4 (MRDLG)	1.68	0.160	3.56	No	Water additive used to control microbes	Distribution system
<b>Control of DBP Precursor</b>									
Total Organic Carbon (TOC)	Samples taken quarterly	TT ≥ 1.0 (Note 4)	n/a	1.4	1.0	1.8	No	Naturally present in the environment	Navy WTP

Contaminant (units)	Sample Year	AL	MCLG	Your Water	Number of Samples Exceeding AL	Violation	Major Source of Contamination	Locations Detected
Copper (ppb)	2010	1300	1300	764 (Note 5)	None	No	Corrosion of household plumbing system, erosion of natural deposits	Distribution system
Lead (ppb)	2010	15	0	2.9 (Note 5)	None	No	Corrosion of household plumbing system, erosion of natural deposits	Distribution system

Contaminant (units)	Sample Year	MCL	MCLG	Your Water	Range	Violation	Major Source of Contamination	Locations Detected	
<b>Turbidity as an Indicator of Filtration Performance</b>									
Turbidity (NTU) (Note 6)	2010	TT = 1 NTU		0	0.108	n/a	No	Soil Runoff	Navy WTP
		TT = percentage of samples <0.3 NTU for 95% of samples			100%	n/a	No		
<b>Acrylamide</b>									
Acrylamide (ppm)	0	TT ≤ 0.05% Dosed at 1 ppm	TT ≤ 0.05% Dosed at 0.2 ppm			No (Note 7)	Added to water during treatment	Navy WTP	

### II. Summary of Required Monitoring and Reporting

Contaminant	Monitoring Period	Date(s) Sampled	Remarks
UCMR2 List 1 Contaminants	Jan -Dec 2010	3/1, 6/7, 9/13, 12/6	Unregulated contaminants are those that does not have a drinking water standard set by USEPA. The purpose of monitoring for these contaminants is to help USEPA decide whether the contaminants should have a standard

## NOTES:

1. The combined Radium (total Radium-226 and Radium-228, pCi/L) MCL and MCLG are 5 and 0 respectively
2. Although there is no collective MCLG for this group, there are individual MCLGs for some of the individual contaminants: HAA; Monochloroacetic acid (70 ppb) Dichloroacetic acid (zero)
3. Compliance with MCL is based on running annual average (RAA) calculated quarterly (highest reported average)
4. Percent removal ratio 12-month RAA, calculated quarterly, must be ≥ 1.0
5. 90<sup>th</sup> percentile level must not exceed Action Level (AL)
6. Turbidity is a measure of water cloudiness and used to indicate water quality and filtration effectiveness. Turbidity has no health effects but can interfere with the disinfection process and provide a medium for microbial growth
7. The combination (or product) of dose and monomer level of Acrylamide should never exceed 0.05% dose at 1 ppm