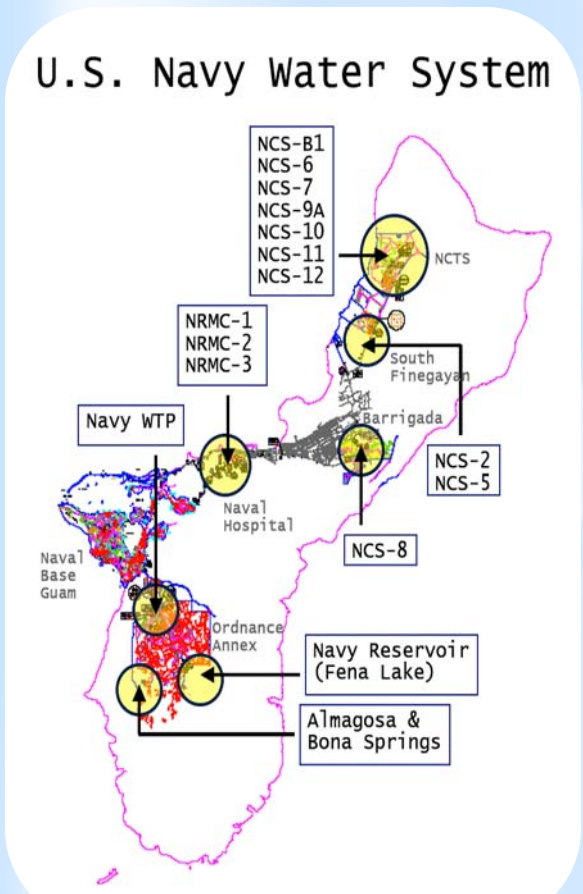
How Can You Report a Water Quality Complaint?

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.

DEPARTMENT OF THE NAVY
U.S. Naval Base Guam
Navy Housing Office
PSC 455, Box 50
FPO AP 96540-0051



2012 U.S. NAVY WATER SYSTEM WATER QUALITY REPORT

NAVAL FACILITIES ENGINEERING COMMAND MARIANAS
PSC 455 Box 195
FPO AP 96540-2937

DZSP21, LLC
P.O. Box GH
Hagåtña, Guam 96932

2012 US NAVY WATER SYSTEM WATER QUALITY REPORT

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, 2012. Included as part of this report is the **"2012 U.S. Navy Water Quality Data"** table detailing the water quality of our system. In 2012, the water quality met all federal and local drinking water health standards.

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 Navy (Fena) Reservoir. It is supplemented by the Almagosa and Bona Springs and is processed at the Navy Water Treatment Plant prior to distribution. This water serves Naval Base Guam and surrounding areas.

Groundwater wells at NCTS, Finegayan, Barrigada, and Naval Hospital further augment our water system supplying these areas and supplementing the surface water fed areas.

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 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 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, the Environmental Protection Agency (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.

The *National Primary Drinking Water Regulations* sets limits for contaminants in drinking water and standards for water treatment that primarily safeguard health. These regulations also require 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.

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 at 1-800-426-4791.

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. 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/lead.

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 at 1-800-426-4791.

How Can You Obtain Additional Information?

Please contact Naval Hospital Preventative Medicine at **(671)344-9787** for health concerns related to this report. For information about the U.S. Navy Water System, please contact the Naval Facilities Engineering Command Marianas Utilities Department at **(671) 333-1321**. Additionally, Guam EPA Safe Drinking Water Program may be reached at **(671) 300-4796**.

2012 U.S. Navy Water Quality Data

The table below presents the 2012 water quality monitoring results of each detected contaminant in comparison with the established drinking water standards. The table also summarizes the monitoring times, the range of detections, whether or not the drinking water standards were met, the major sources of the contaminant and the locations detected.

DEFINITIONS:

1. Action Level (AL) - The concentration of a contaminant 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 will 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.
7. Secondary Maximum Contaminant Level (SMCL) - Levels established by the National Secondary Drinking Water Regulations which control contaminants primarily affecting the aesthetic qualities relating to the public acceptance of 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
ARA - annual running average

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

CONTAMINANT	Sample Date	MCLG	MCL	Your Sample	Range Low	Range High	Violation	Major Sources of Contaminant	Locations Detected
Synthetic Organic Compounds									
Chlordane (ppb)	1/24/2012	0	2	0.5	nd	0.5	No	Residue of banned termiticide	Well NCS-B1
Inorganic Compounds									
Barium (ppm)	1/11/2012	2	2	0.002	nd	0.002	No	Discharge of drilling wastes; discharge from metal refineries; and erosion of natural deposits.	NTWP Clearwell, Wells NCS-11, NCS-12
Chromium (ppb)	1/11/2012	100	100	11	nd	11	No	Discharge from steel and pulp mills; erosion of natural deposit.	Wells NCS-B1, NCS-6, NCS-7, NCS-9A, NCS-10, NCS-11, NCS-12
Fluoride (ppm)	1/11/2012	4	4	1	nd	1	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories	NWTP Clearwell, Wells NCS-B1, NCS-10
Nitrate (ppm)	4/10/2012	10	10	3.5	0.3	3.5	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	NWTP Clearwell, Wells NCS-B1, NCS-6, NCS-7, NCS-9A, NCS-10, NCS-11, NCS-12, NRMC-1, NRMC-2
Radionuclides									
Radium-226 (pCi/L)	1/24/2012	0 *Note 1*	5 *Note 1*	1	n/a	1	No	Erosion of natural deposits	Well NCS-B1
Disenfectant and Disinfection Byproduct (DBPs)									
HAA5 [Five Haloacetic Acids] (ppb)	2012	n/a *Note 2*	60	45 *Note 3*	nd	142	No	Byproduct of drinking water chlorination	Within the distribution system
TTHMs [Total Trihalomethanes] (ppb)	2012	n/a *Note 2*	80	59 *Note 3*	nd	187	No	Byproduct of drinking water chlorination	Within the distribution system
Chlorine (ppm)	2012	4 (MRDLG)	4 (MRDL)	1.8 *Note 3*	nd	3.9	No	Water additive used to control microbes	Within the distribution system
Control of DBP Precursors									
Total Organic Carbon, TOC (% removal ratio ARA)	2012	n/a	TT ≥ 1.0 *Note 4*	2.1	1.9	2.2	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)	2012	1300 *Note 5*	1300	1100	1	No	Corrosion of household plumbing system, erosion of natural deposits	Within the distribution system
Lead (ppb)	2012	15 *Note 5*	0	1.3	None	No	Corrosion of household plumbing system, erosion of natural deposits	Within the distribution system

CONTAMINANT (Units)	Sample Date	MCLG	MCL	Reporting Value	Violation	Major Sources of Contaminant	Locations Detected
Microbiological Contaminants							
Total Coliform [TC] (% positive per month)	2012	0	5%	0%	No	Naturally present in the environment	Within the distribution system
Fecal Coliform [FC] (positive repeat sample)	2012	0	1 *Note 6*	0	No	Human and animal fecal waste	Within the distribution system

CONTAMINANT (Units)	Sample Date	MCLG	MCL	Your Water	Violation	Major Sources of Contaminant	Locations Detected
Turbidity as an Indicator of Filtration Performance							
Turbidity (NTU) *Note 7*	Sept. 2012	n/a	TT ≤ 0.3 NTU for 95% of samples	99%	No	Soil runoff	Navy WTP
	9/18/2012		TT = 1 NTU	0.4	No		

CONTAMINANT (Units)	Year	MCLG	MCL	Your Water	Violation	Major Sources of Contaminant	Locations Detected
Acrylamide							
Acrylamide (ppm)	2012	0	TT ≤ 0.05% Dosed at 1 ppm	In Compliance	No *Note 8*	Added to water during treatment	Navy WTP

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), trichloroacetic acid (20 ppb) **THM**: bromodichloromethane (zero), bromoform (zero), dibromochloromethane (60 ppb).
3. Compliance with MCL is based on ARA calculated quarterly (highest reportable average).
4. Percent removal ratio 12-month ARA, calculated quarterly, must be ≥ 1.0.
5. The AL is exceeded if the concentration of more than 10 percent of tap water samples collected (the "90th percentile" level) is greater than 1300 ppb for copper and 15 ppb lead.
6. MCL = an FC-positive or E. coli-positive routine sample followed by a TC negative repeat sample. A TC positive repeat sample is a violation of the MCL.
7. 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. MCL = 95% of samples within a month should never exceed 0.3 NTU and all samples must never exceed 1 NTU.
8. The combination (or product) of dose and monomer level of acrylamide should never exceed 0.05% dosed at 1 ppm (or equivalent).