

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>.

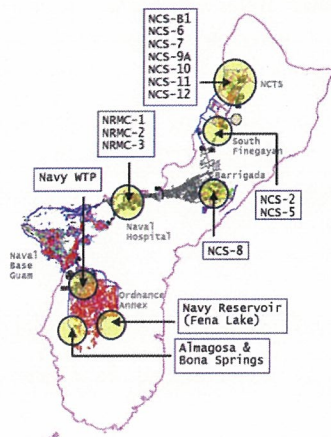
How Can You Obtain Additional Information?

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.

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 (671) 333-2011. Arrangements can be made to have your water sampled and analyzed to ensure that it is safe to drink.

U.S. Navy Water System



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 U.S. Navy Water System 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 or 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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.

Health Precautions

During the 1st and 2nd quarter of 2015, the Secondary Maximum Contaminant Level (SMCL) for fluoride was exceeded at three wells located in the northern part of Guam. The wells are being monitored continuously to prevent any exceedance. The Navy Water System has also completed all monitoring requirements for the third cycle of the Third Unregulated Contaminant Monitoring Rule (UCMR3) which was conducted during the 3rd quarter of 2014 through the 2nd quarter of 2015.

Unregulated contaminants are those that do not have a drinking water standard set by U.S. EPA. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should have a standard. As our customers, you have a right to know that these data are available. If you are interested in examining the results, please contact DZSP21 Environmental Compliance at 339-8033 and Naval Base Guam, PWD Environmental Division at 339-4100.

Monitoring, Reporting and Violations

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

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.

Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water 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 by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems.

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 Environmental Protection Agency's (EPA) Safe Drinking Water Hotline at 1-800-426-4791.

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

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 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 Regulations

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, 2015. Included as part of this report is the "2015 U.S. Navy Water Quality Data" table detailing 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.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example people in apartments, nursing homes, schools or businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

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

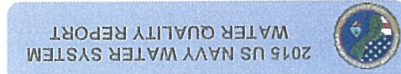
The primary source of water for the U.S. Navy Water System is the Navy (Fena) Reservoir. It is supplemented by Almagosa Springs and Bona Springs. Plant prior to distribution to Naval Base Guam and surrounding areas. Groundwater wells at NCTS, Barrigada, and Naval Hospital further augment our water supply in these areas and supplementing the surface water-fed areas.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the 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:

Why are contaminants found in my water?

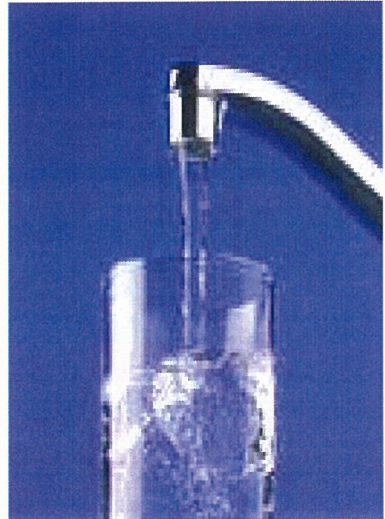
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U.S. Naval Base Guam
Navy Housing Office
PSC 455, Box 50
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2015 U.S. NAVY WATER SYSTEM WATER QUALITY REPORT



NAVAL FACILITIES ENGINEERING
COMMAND MARIANAS
PSC 455 Box 195
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DZSP21, LLC
P.O. Box GH
Hagåtña, Guam 96932

2015 U.S. Navy Water Quality Data

The table below presents the 2015 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:

- Action Level (AL) - The concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.
- 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 available treatment technology.
- 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.
- 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.
- 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.
- Treatment Technique (TT) - A required process intended to reduce the level of a contaminant in drinking water.
- 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 ppb - parts per billion or micrograms per liter ARA - annual running average
n/a - not applicable ppm - parts per million or milligrams per liter WTP - water treatment plant
nd - not detected pCi/L - picocuries per liter MRL - Minimum Reporting Level

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

CONTAMINANT (Units)	Sample Year	MCLG	MCL	Your Water	Range Low	High	Violation	Major Sources of Contaminant	Locations Detected
Synthetic Organic Compounds									
Picloram (ppb)	Throughout 2015	500	500	0.41	0.28	0.41	No	Herbicide runoff	Well NCS-8 (Radio Barrigada)
Volatile Organic Compounds									
Tetrachloroethylene (ppb)	7/29/2015	0	5	0.48	nd	0.48	No	Discharge from factories and dry cleaners.	Well NRM-C-1
Inorganic Compounds									
Barium (ppm)	2/24/2015	2	2	0.0021	nd	0.0021	No	Discharge of drilling wastes; discharge from metal refineries; and erosion of natural deposits	Navy WTP
Chromium (ppb)	2/24/2015	100	100	2.10	1.40	2.10	No	Discharge from steel and pulp mills; erosion of natural deposits	Wells NCS-B1, NCS-9A
Fluoride (ppm)	Throughout 2015	4	4	3.84	0.55	3.84	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories	Navy WTP, NCS-B1, NCS-6, NCS-10, NRM-C-1
Nitrate (ppm)	Throughout 2015	10	10	2.5	0.11	2.5	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	Navy WTP, Wells NCS-B1, NCS-6, NCS-8, NCS-9A, NCS-10, NCS-11, NCS-12, NRM-C-1, NRM-C-2
Disinfectant and Disinfection Byproduct (DBPs)									
HAA5 [Five Haloacetic Acids] (ppb)	Throughout 2015	n/a Note 1	60	17 Note 2	8.9	19.6	No	Byproduct of drinking water chlorination	Distribution system
THMs [Total Trihalomethanes] (ppb)	Throughout 2015	n/a Note 1	80	49 Note 2	29.5	55.2	No		
Chlorine (ppm)	3/27/2015	4 (MRDLG)	4 (MRDL)	3.2	nd	3.2	No		
Control of DBP Precursors [Total Organic Carbon, TOC] (% removal ratio)	Throughout 2015	n/a	TT ≥ 1.0 Note 3	2.0 Note 2	1.6	2.2	No	Naturally present in the environment	Navy WTP
Special Monitoring for Sodium									
Sodium (ppm)	Throughout 2015	n/a	n/a	62.0	15.0	62.0	No	Salt water intrusion from aquifer/salt water interface; sodium hydroxide reaction for pH control in water treatment	Navy WTP, Wells NCS-B1, NCS-6, NCS-8, NCS-9A, NCS-10, NCS-11, NCS-12, NRM-C-1, NRM-C-2
CONTAMINANT (Units) Sample Year AL MCLG Your Water Number of Samples Exceeding AL Violation Major Source of Contamination									
Lead and Copper									
Copper (ppm)	2015	1.3 Note 4	1.3	0.269	None	None	No	Corrosion of household plumbing system, erosion of natural deposits	Distribution system
Lead (ppb)	2015	15 Note 4	0	nd	None	None	No	Corrosion of household plumbing system, erosion of natural deposits	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)	1/21/2015	0	5%	2.0%	No	Naturally present in the environment	321 Johnson Road, Coral Ridge Housing, Naval Hospital		
Fecal Coliform [FC] (positive sample)	2015	0	1 Note 5	0	No	Human and animal fecal waste	None		
CONTAMINANT (Units) Sample Date MCLG MCL Your Water Violation Major Sources of Contaminant Locations Detected									
Turbidity as an Indicator of Filtration Performance									
Turbidity (NTU)	2015	n/a	TT ≤ 0.3 NTU for 95% of samples	100% (Jan-Dec)	No	Soil runoff	Navy WTP		
	12/23/2015			0.210	No				

II. SUMMARY OF REQUIRED MONITORING AND REPORTING

VIOLATION	Sample Date	Explanation	Steps Taken to Correct Violation	Potential Adverse Health Effect		
Exceedance of the Fluoride Secondary Maximum Contaminant Level (SMCL)	2/10/2015 and 5/12/2015	Exceedance of the fluoride SMCL of 2 mg/L occurred at Well NCS-B1 (3.84 mg/L), NCS-6 (2.35 mg/L) and NCS-10 (2.2 mg/L), but did not exceed MCL of 4 mg/L. Tier 3 public notification requirements were met.	Navy water system is continuing to monitor the fluoride levels; you will be notified if fluoride levels exceed the MCL limit of 4 mg/L.	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than 9 years old. Mottling also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.		
CONTAMINANTS (Units) Sample Date Highest Level Detected Results MRL Major Source of Contaminants Locations Detected						
Third Unregulated Contaminants Monitoring Rule (UCMR3)						
Chlorate (ppb)	7/15/2014 - 4/28/2015	340	150 - 340	20.0 µg/L Note 6	Agricultural defoliant or desiccant, disinfection by-products and used in making steel and other alloys.	Navy WTP, Kilo Wharf
Hexavalent Chromium (ppb)	7/15/2014 - 4/28/2015	3.0	0.052 - 3.0	0.030 µg/L Note 6	Naturally occurring elements, used in making steel and other alloys.	Navy WTP, NCS-6, NCS-7, NCS-8, NCS-9A, NCS-10, NCS-11, NCS-12, NRM-C-1, NCS-B1, Kilo Wharf, Naval Hospital and Barrigada BPS.
Strontium (ppb)	7/15/2014 - 4/28/2015	250	90 - 250	0.300 µg/L Note 6	Naturally occurring; used in the faceplate glass of cathode-ray tube	Navy WTP, NCS-6, NCS-7, NCS-8, NCS-9A, NCS-10, NCS-11, NCS-12, NRM-C-1, NCS-B1, Kilo Wharf, Naval Hospital and Barrigada BPS.
Vanadium (ppb)	7/15/2014 - 4/28/2015	4.0	0.360 - 4.0	0.200 µg/L Note 6	Naturally occurring elemental metal, used as vanadium pentoxide, which is chemical intermediate and a catalyst.	Navy WTP, NCS-6, NCS-7, NCS-8, NCS-9A, NCS-10, NCS-11, NCS-12, NRM-C-1, NCS-B1, Kilo Wharf, Naval Hospital and Barrigada BPS.

NOTES:

- 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), chloroform (70 ppb), dibromochloromethane (60 ppb).
- Compliance with MCL is based on ARA calculated quarterly (highest reportable average).
- Percent removal ratio 12-month ARA, calculated quarterly, must be ≥ 1.0.
- The AL is exceeded if the concentration for more than 10 percent of tap water samples collected (the "90th percentile" level) is greater than 1.3 ppm for copper and 15 ppb lead.
- MCL = a routine sample and repeat sample from the same location are TC positive, or any routine or repeat sample is FC positive.
- Unregulated contaminants are those that do not have drinking water standards set by U.S. EPA and the purpose of monitoring is to decide if contaminants should have a standard.