



U.S. Army Garrison
Yuma Proving Ground
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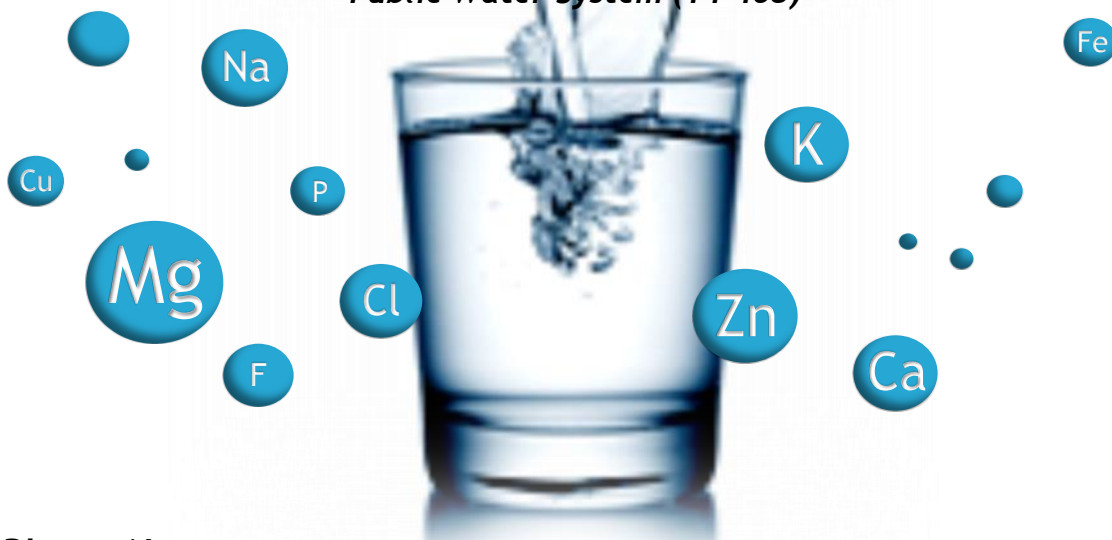
2017 Water Quality Report Consumer Confidence Report

Howard Cantonment Area

2017 Water Quality Report

Consumer Confidence Report

**Howard Cantonment Area
Public Water System (14-403)**



Please Note: This Consumer Confidence Report (CCR) covers only the potable water system servicing the Howard Cantonment Area (regulated as Main Administrative Area) at U.S. Army Garrison Yuma Proving Ground (USAGYPG). No other water systems are covered or otherwise referenced in this information.

For More Information...

This Consumer Confidence Report was prepared by the Environmental Sciences Division, USAG Yuma Proving Ground. For questions, information about drinking water or additional copies of this report please contact Sergio Obregon, Safe Drinking Water Program Manager, at (928) 328-2015, or Charles C. Wullenjohn of the Yuma Proving Ground Public Affairs Office at (928) 328-6189.

Your 2017 Water Quality

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CONSUMER CONFIDENCE REPORT

U.S. Army Garrison Yuma Proving Ground

This report covers the Howard Cantonment Area (regulated as Main Administrative Area) AZ04-14403.

Issued June 2018

Dear Valued Water Consumer,

Our Continuing Commitment to You

YPG and its trained, certified water quality professionals are committed to:

- Providing high quality, safe drinking water to its residents and workforce,
- Monitoring and testing the water we provide to ensure it is always safe to drink,
- Providing opportunity for residents and workforce to ask questions and learn during YPG's Safety Week, held each year in February, in addition to quarterly resident town hall meetings.

Thank you for taking the time to read this annual water report. We are here to answer any questions or concerns you may have. Certified laboratory results show our water is well below the federal guidelines for allowable constituents in drinking water. *The proof is in the data!* If you have any individual questions, please feel free to contact us. We'd be happy to answer any questions you may have.

The United States Army Garrison (USAG) Yuma Proving Ground (YPG) Water Treatment Plant staff are happy to provide guided tours of the water facilities on YPG. If you are interested in a private tour of a water treatment plant, please contact Sergio Obregon for scheduling.

YPG is proactive in providing safe, quality water to its residents and workforce throughout all three cantonment areas. Although this report's data covers the Howard Cantonment Area (HCA) only, the general information is relevant to drinking water across the United States.

Our water system provided drinking water that met all regulatory requirements during 2017.

If you have any questions about the quality of your water, please contact Sergio Obregon, Safe Drinking Water Program Manager, at 928-328-2015 or Sergio.obregon.civ@mail.mil

Thank you for taking interest in your drinking water.

Sincerely,

Your Public Works Directorate



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Introduction

This is an annual report for the Howard Cantonment Area on the quality of water delivered by YPG. Under the "Consumer Confidence Reporting Rule" of the Safe Drinking Water Act (SDWA), community water systems are required to report this water quality information to the consuming public. Presented in this report is information on the source of

our water, its constituents, and the health risks associated with any contaminants.

HCA is regulated as a community water system because there are residents living within the service area year-round. This type of system requires additional monitoring of certain

contaminants which other systems may not need due to the possibility of sensitive populations consuming the water (i.e. children and elderly).

For more information on water system classifications, please visit <https://www.epa.gov/dwreginfo/information-about-public-water-systems>.

Information About Federal Regulations

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) and Arizona Department of Environmental Quality (ADEQ) prescribe regulations that limit the amount of certain contaminants in water provided by

public water systems. The U.S. Food and Drug Administration regulations also establish limits for contaminants in bottled water that provide the same protection for public health.



Most constituents of drinking water are naturally occurring throughout the environment.

Substances in Drinking Water

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, 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 source water include:

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

Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, or residential uses.

Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can come from gas stations, urban storm water runoff, or septic systems.

Radioactive contaminants, which can be naturally occurring, the result of oil and gas production, or mining activities.

Primary vs. Secondary Drinking Water Regulations

The EPA sets Current Drinking Water Standards for drinking water. These standards are made up of the National *Primary Drinking Water Regulations* and the National *Secondary Drinking Water Regulations*.

The *Primary Standards* set levels of contaminants that may pose a health risk when present in drinking water supplies and are known or anticipated to occur in public water systems. The Primary Standards contaminants are divided into Inorganic Chemicals, Organic Chemicals, Radionuclides, and Microorganisms.

The *Secondary Standards* are non-enforceable guidelines that establish recommendations for contaminants that may cause cosmetic effects such as skin or tooth discoloration and aesthetic effects such as taste, odor and color. The EPA recommends Secondary Standards for water treatment systems but does not require systems to comply.

Questions or Concerns?

YPG Resident Town Hall meetings are held quarterly. For a current schedule visit www.desertoasiscommunities.com.

YPG Town Hall meetings are held intermittently during the year. When meetings are scheduled, they are announced via email.

About Lead and Copper

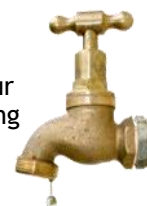
Lead and copper are rarely found in source waters; however, both of these metals can enter drinking water by leaching from household plumbing and fixtures. Water that sits in your pipes for long periods of time may dissolve tiny amounts of lead and/or copper (parts per billion levels) into household water. The EPA has developed a rule to minimize the levels of these metals in drinking water.

The Lead and Copper Rule was developed to protect public health by establishing an action level of 15 parts per billion (ppb) for lead and 1.3 parts per million (ppm) for copper at the tap.

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.

YPG is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. While HCA monitoring consistently shows levels well below the Action Level (AL), due to the age of some homes it is reasonable to assume there are outdated plumbing materials throughout the distribution system that could contribute to the levels of lead and/or copper.

If your water has been sitting in your household plumbing 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 do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants.* 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 at 1(800) 426-4791 or at www.epa.gov/safewater/lead.



Facts About Total Coliform Bacteria

Coliform bacteria are naturally present in the environment and are generally not harmful. Coliform bacteria may occur in soil, vegetation, animal waste, sewage, and surface waters.

This Consumer Confidence Report (CCR) reflects changes in drinking water regulatory requirements during 2016. All

water systems are required to comply with the 'Total Coliform Rule' through March 31, 2016. Beginning April 1, 2016, all water systems are now required to comply with the federal 'Revised Total Coliform Rule.' The new federal rule maintains the purpose to protect public health by ensuring the integrity of the drinking water distribution

(Continued on page 4)

Facts About Total Coliform Bacteria (continued from page 3)

system and monitoring for the presence of microbials (i.e. total coliform and E. coli bacteria). The EPA anticipates greater public health protection as the new rule requires water systems that are vulnerable to microbial contamination to identify and fix problems. Water systems that exceed a specified frequency of total coliform occurrences are required to conduct an assessment to determine if any sanitary defects exist. If found, these must be corrected by the water system.

YPG Howard Cantonment Area routinely tests for the presence of coliform bacteria as an indicator of the sanitary quality of drinking water.

HCA analyzed 48 coliform samples in 2017, zero of which were positive for total coliform bacteria. The maximum allowed by EPA for coliforms is one positive in any month.

A positive coliform test result does not necessarily mean a maximum contaminant level (MCL) has been exceeded, or that there is a problem in the water system.

More information and general guidelines on ways to lessen the risk of infection by microbes are available from the EPA's Safe Drinking Water Hotline at 1(800) 426-4791 or at <https://www.epa.gov/ground-water-and-drinking-water>.

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The 'Revised Total Coliform Rule' went into effect during 2016 to help protect public health.

Individual Health Concerns

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. EPA and the Center 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 Drinking Water Hotline 1(800) 426-4791.



What We Do

At YPG we monitor our community water system for every federally regulated contaminant. The contaminants listed on pages 6-7 are ones which were detected in your water; there are many additional contaminants that were monitored for but were not detected in your water and therefore are not listed in this report. Drinking water samples are collected from the treatment plant at the entry point to the

distribution system (EPDS) and from water taps in the service area as required by federal regulations. Samples are sent to an Arizona Department of Health Services (ADHS) and EPA accredited laboratory for analysis. Results for the most recent monitoring through the end of 2017 for each contaminant are provided in this CCR.

The state allows us to monitor for some

contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

ADEQ has the authority to enforce federal regulations regarding drinking water. The results are reported to ADEQ and also kept on file by the YPG Environmental Sciences Division.



YPG follows all federal regulations under the Safe Drinking Water Act.

Information on Detected Contaminants

Many people are concerned about drinking water issues identified by the news media. Elements such as arsenic and mercury, pesticides such as Aldrin and DDT, and bacteria such as E. coli, have increased public concerns about the safety of the water they drink.

Arizona Source Water Assessment Program

The Source Water Assessment Program (SWAP) is an evaluation of water sources that provide recreational and drinking water to public water systems. This evaluation is used to determine the degree to which a public water system is protected, or at risk from contamination. The assessment examines the possible migration of contaminants from use of land bordering the watershed. According

to the 2002 Arizona SWAP, the area our water system draws from is considered an "attaining" watershed. It is unlikely, at this time, that the source our aquifer draws from is susceptible to contamination from adjacent land uses. For more information, a copy of Arizona's Source Water Assessment Plan is available at <http://legacy.azdeq.gov/environment/water/dw/swap.html>

Our water system provided drinking water that met all regulatory requirements during 2017.



For more information on protecting your source water, please visit <https://www.epa.gov/sourcewaterprotection>

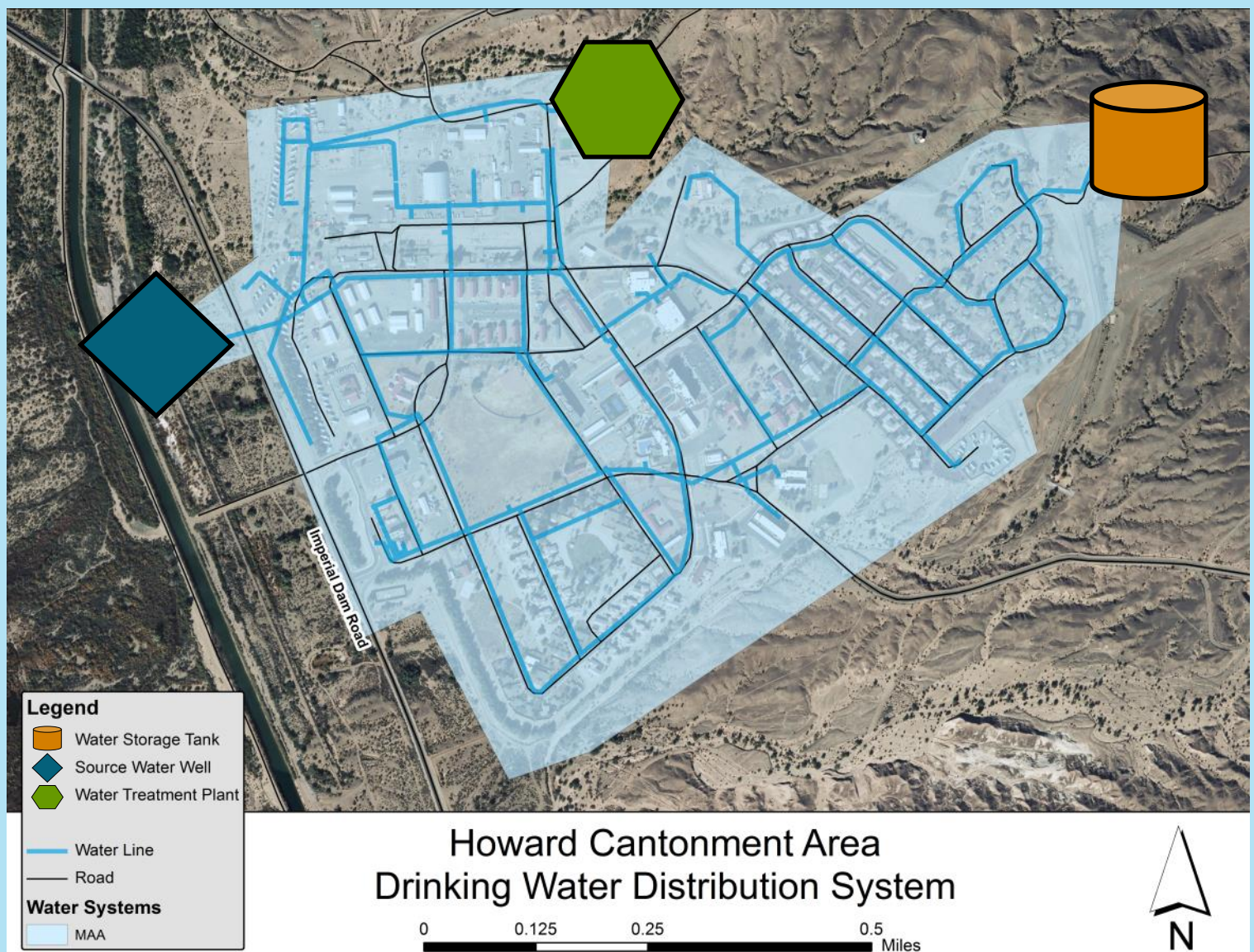
The Source of Your Drinking Water

Our water supply for HCA is derived from groundwater pumped from the Coarse Gravel Aquifer, which lies in the ancient streambed of the Colorado River. The water is pumped from two wells that range in depth from 140 feet to 145 feet. Although the minimum depth to groundwater is approximately 27 feet, our tap water is drawn from between 105 feet to 130 feet below the ground surface. The pumped water is then treated through an electro dialysis reversal (EDR) unit to provide quality drinking water. Additionally, our water is chlorinated (treatment technique) to help prevent the growth of disease causing organisms, such as viruses and bacteria.

Protecting Your Water

Protecting the sources of drinking water helps protect our health. It's everyone's responsibility, and here are a few ways you can help:

- ◆ Eliminate excess use of lawn and garden fertilizers and pesticides—they contain hazardous chemicals that can reach your drinking water source
- ◆ Pick up after your pets
- ◆ Dispose of chemicals properly; take used motor oil to a recycling center



2017 Howard Cantonment Area Drinking Water Results

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Parameter	Units	Highest Level Allowed (EPA's MCL)	Ideal Goal (EPA's MCLG)	HCA Highest Result	Range/ Average	Exceeded Standard	Sample Date	Monitoring Frequency	Major Sources in Drinking Water	Health Effects
PRIMARY STANDARDS - Mandatory Health-Related Standards The National Primary Drinking Water Regulations (NPDWR) are legally enforceable primary standards and treatment techniques that apply to public water systems. Primary standards and treatment techniques protect public health by limiting the allowable levels of contaminants in drinking water.										
Microbiological										
Total Coliform Bacteria	# positive coliforms	One positive coliform sample per month	0	0	0	No	Monthly	Monthly	Naturally occurring in the environment or can result from human and animal fecal waste entering the water system	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.
Fecal Coliform Bacteria (E. coli)	# positive E. coli	0	0	N/A, All monitoring results during 2017 were ABSENT for Total Coliform; analysis for Fecal Coliform was not required.			Monthly, if required	Human and animal fecal waste	Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.	
Disinfection Residuals and Disinfection By-Products										
Total Chlorine Residuals	ppm (mg/L)	MRDL = 4.0	MRDLG = 4.0	1.51	0.90	No	Monthly	Monthly	Water additive used to control microbes	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
Total Trihalomethanes (TTHM)	ppb	80	N/A	10	6.4 - 10	No	July 2017	Annually	By-product of drinking water disinfection	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.
Haloacetic Acids (HAA5)	ppb	60	N/A	2.2	< 0.38 - 2.2	No	July 2017	Annually	By-product of drinking water disinfection	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
Metals - As a By-Product of Corrosion of Consumer's Plumbing										
Lead	ppb	AL = 15	0	Highest Level Detected: 9.1	< 1.0 - 9.1	No	September 2015	Once every 3 years	Corrosion of household plumbing systems; Erosion of natural deposits	Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
				90 th Percentile: < 1.0						
Copper	ppm	AL = 1.3	1.3	Highest Level Detected: 0.29	0.084 - 0.29	No	September 2015	Once every 3 years	Corrosion of household plumbing systems; Erosion of natural deposits	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's disease should consult their personal doctor.
				90 th Percentile: 0.260						
Radiological										
Beta/Photon Emitters	mrem/yr	4 mrem/yr	0	< 4	Single Sample	No	March 2017	Once every 6 years	Decay of natural and man-made deposits	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta particle and photon radioactivity in excess of the MCL over many years may have an increased risk of getting cancer.
Alpha Emitters	pCi/L	15 pCi/L	0	< 1	Single Sample	No	March 2017	Once every 6 years	Erosion of natural deposits	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Combined Radium (226 & 228)	pCi/L	5 pCi/L	0	< 0.6	Single Sample	No	March 2017	Once every 6 years	Erosion of natural deposits	Some people who drink water containing radium-226 or -228 in excess of the MCL over many years may have an increased risk of getting cancer.
Combined Uranium (234, 235, 238)	pCi/L	30 µg/L	0	2.3 ± 0.7	Single Sample	No	March 2017	Once every 6 years	Erosion of natural deposits	Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity

2017 Howard Cantonment Area Drinking Water Results

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Parameter	Units	Highest Level Allowed (EPA's MCL)	Ideal Goal (EPA's MCLG)	HCA Highest Result	Range/Average	Exceeded Standard	Sample Date	Monitoring Frequency	Major Sources in Drinking Water	Health Effects
<i>(Continued) PRIMARY STANDARDS - Mandatory Health-Related Standards</i>										
<i>Inorganic Chemicals</i>										
Antimony	ppb	6	6	0.11	Single Sample	No	March 2017	Once every 3 years	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder	Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.
Barium	ppm	2	2	0.0014	Single Sample	No	March 2017	Once every 3 years	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
Fluoride	ppm	4	4	0.47	Single Sample	No	March 2017	Once every 3 years	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories	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 nine 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.
Nitrate	ppm	10	10	0.075	Single Sample	No	March 2017	Annually	Runoff from fertilizer use; Leaching from septic tanks, sew age; Erosion of natural deposits	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
Selenium	ppb	50	50	0.28	Single Sample	No	March 2017	Once every 3 years	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines	Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.
**PRIMARY STANDARDS - Mandatory Health-Related Standards <i>The following contaminants are Primary Standards which YPG monitored for, however were NOT detected in your water. Reporting non-detected contaminants is not required, but YPG is reporting for your knowledge and awareness.</i>										
Arsenic	ppb	10	0	ND	Single Sample	No	February 2017	Once every 3 years	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes	Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.
Parameter	Units	Secondary Standard (EPA's Recommended Highest Level)		HCA Highest Level	Range/Average	Exceeded Secondary Standard	Sample Date	Monitoring Frequency	Major Sources in Drinking Water	Noticeable Effects Above the Secondary MCL
SECONDARY STANDARDS - Aesthetic Standards <i>National Secondary Drinking Water Regulations are non-enforceable guidelines regarding 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 secondary standards to water systems but does not require systems to comply. However, some states may choose to adopt them as enforceable standards.</i>										
pH	NA	6.5-8.5		7.81	6.88 - 7.81	No	Monthly	Monthly in conjunction with Total Coliform	The pH level of your drinking water reflects how acidic it is. pH stands for "potential of hydrogen," referring to the amount of hydrogen found in a substance (in this case, water). pH is measured on a scale that runs from 0 to 14. Seven is neutral, meaning there is a balance between acid and alkalinity.	Low pH: bitter metallic taste; corrosion. High pH: slippery feel; soda taste; deposits.
Total Dissolved Solids (TDS)	mg/L	500		329	174 - 329	No	Intermittent throughout each month	Averaged monthly	TDS represents the total concentration of dissolved substances in water. TDS is made up of inorganic salts, as well as a small amount of organic matter. Common inorganic salts that can be found in water include calcium, magnesium, potassium and sodium, which are all cations, and carbonates, nitrates, bicarbonates, chlorides and sulfates, which are all anions. Cations are positively charged ions and anions are negatively charged ions.	Hardness; deposits; colored water; staining; salty taste.
<i>Unregulated Contaminants</i>										
Sodium	ppm	N/A		49	Single Sample	N/A	March 2017	Once every 3 years	Sodium is the sixth most abundant element on Earth and is widely distributed in soils, plants, water, and foods. Most of the world has significant deposits of sodium-containing minerals. Groundwater typically contains higher concentrations of minerals and salts than do surface waters.	Sodium is not currently a regulated substance in drinking water; however, it is of interest to some people due to individual health concerns.

Definitions

90th Percentile The value in a data set in which 90 percent of the set is less than or equal to this value.

Action Level (AL) The level of lead or copper which, if exceeded in over 10% of the homes tested, triggers treatment or other requirements that a water system must follow.

Electrodialysis Reversal (EDR) is an electrodialysis reversal water desalination membrane process that has been commercially used since the early 1960s. An electric current migrates dissolved salt ions, including fluorides, nitrates and sulfates, through an electrodialysis stack consisting of alternating layers of cationic and anionic ion exchange membranes. Periodically, the direction of ion flow is reversed by reversing the polarity of the applied electric current.

Maximum Contaminant Level (MCL) The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the Maximum Contaminant Level Goals (MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

Maximum Contaminant Level Goal (MCLG) The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the US EPA.

Maximum Residual Disinfectant Level (MRDL) The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG) The level of a disinfectant added for water treatment 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.



Abbreviations

<	Indicates the contaminant was not detected or was less than the laboratory reporting limit	N/A	Not Applicable: no State or Federal standards are established
ADEQ	Arizona Department of Environmental Quality	ND	None Detected: sample was taken and chemical was not detected
ADHS	Arizona Department of Health Services	pCi/L	picocuries per Liter; a measure of radioactivity in water
AL	Action Level	ppb	Parts per billion
ALG	Action Level Goal	ppm	Parts per million
CCR	Consumer Confidence Report; annual water quality report	ppt	Parts per trillion
CDC	Center for Disease Control	PWS	Public water system
EDR	Electrodialysis reversal	RTCR	Revised Total Coliform Rule; regulation in effect starting April 2016
EPA	United States Environmental Protection Agency	SDWA	Safe Drinking Water Act; federal law that sets forth drinking water regulations
EPDS	Entry point to the distribution system	SWAP	Source Water Assessment Program
HCA	Howard Cantonment Area	TCR	Total Coliform Rule; regulation in effect through March 2016
MCL	Maximum Contaminant Level	USAG	United States Army Garrison
MFL	Million fibers per Liter	YPG	Yuma Proving Ground
MRDL	Maximum Residual Disinfectant Level		
MRDLG	Maximum Residual Disinfectant Level Goal		

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For more information on
anything relating to YPG
drinking water, please
contact Sergio Obregon,
Safe Drinking Water
Program Manager.

(928) 328-2015
Sergio.Obregon.civ@mail.mil

ONE PART PER MILLION (PPM) IS LIKE...

- 1 second in 11.6 days
- 1 teaspoon in 1,302 gallons
- 1 drop in 13.6 gallons
- 1 milligram per liter (mg/L)

ONE PART PER BILLION (PPB) IS LIKE...

- 1 second in 31.7 years
- 1 teaspoon in 1.3 million gallons
- 1 drop in 13,563 gallons
- 1 microgram per liter (µg/L)

ONE PART PER TRILLION (PPT) IS LIKE...

- 1 second in 31,710 years
- 1 teaspoon in 1.3 billion gallons
- 1 drop in 13,563,368 gallons
- 1 nanogram per liter (ng/L)