# 2015 Water Quality Report

## Howard Cantonment Area

Public Water System (14-403)

*Please Note: This report 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.*


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Consumer Confidence Report

### For More Information

This Consumer Confidence Report was prepared by the Environmental Sciences Division, USAG Yuma Proving Ground. For questions or information about drinking water please contact Sergio Obregón, Environmental Protection Specialist, at (928) 328-2015.

For additional information or copies of this report you may contact Charles C. Wullenjohn of the Yuma Proving Ground Public Affairs Office at (928) 328-6189.

The presence of some contaminants does not necessarily indicate that water poses a health risk. Drinking water and bottled water may reasonably be expected to contain at least small amounts of some contaminants. To ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) has established regulations for public water systems that limit the amount of certain contaminants in tap water. The U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 1-800-426-4791. Information on bottled water can be obtained from the U.S. Food and Drug Administration.

### Introduction

This is an annual report on the quality of water delivered by the United States Army Garrison Yuma Proving Ground (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.

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.

### 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.

***Our water system provided drinking water that met all regulatory requirements during 2015.***

### Substances in Drinking Water

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.

### The Source of Your Drinking Water

Our water supply for the Howard Cantonment Area (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 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.

### Arizona Source Water Assessment Program

The Source Water Assessment Program 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 Source Water Assessment, the area our water system draws from is considered an "attaining" watershed. It is unlikely, at this time, that the source for 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://www.adeq.state.az.us/environ/water/dw/swap.html

Questions or Concerns?

YPG Resident Town Hall meetings are held quarterly.
Visit www.desertoasiscommunities.com for a current schedule.

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

### 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/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).

# Monitoring of Your Drinking Water

At YPG we monitor our community water system for the contaminant groups listed below. Drinking water samples are collected from the entry point to the distribution system (EPDS) at the treatment plant and from water taps in the service area as required by regulatory requirements. Samples are sent to an Arizona Department of Environmental Quality (ADEQ) and EPA accredited laboratory for analysis. Results for the most recent monitoring of each contaminant group are provided below. The results are reported to ADEQ and also kept on file by the YPG Environmental Sciences Division. ADEQ has the authority to enforce federal regulations regarding drinking water.

## Sampling Results for the YPG Howard Cantonment Area Drinking Water Quality

| MICROBIOLOGICAL<br>Naturally occurring in the environment or can result from human and animal fecal waste entering the water system; Monitored monthly. | Exceeded Standard | Number of Present (P) Samples | Absent (A) Present (P) | Number of Present (P) Samples Allowed (MCL) | Ideal Goal (MCLG) | Sample Date |
|---|---|---|---|---|---|---|
| **Total Coliform Bacteria** (Absent/Present) | No | 0 | A | 0 | 0 | Monthly |
| **Fecal Coliform** (Present/Absent) | N/A, All monthly sampling results during 2015 were Absent for Total Coliform; analysis for Fecal Coliform was not required | | | 0 | 0 | Monthly, if required |
| **DISINFECTANTS**<br>Water additives used to control microbes in the water sources; Monitored monthly in conjunction with Microbiological. | **Exceeded Standard** | **Running Annual Average** | **Range of all Samples (low-high)** | **Highest Average Allowed (MCL)** | **Ideal Goal (MCLG)** | **Sample Date** |
| **Chlorine** (ppm) | No | 1.90 | 0.30 - 3.40 | 4 | 4 | Monthly |
| **DISINFECTION BY-PRODUCTS**<br>By-product of drinking water disinfection; Monitored annually. | **Exceeded Standard** | **Highest Level Detected** | **Range of all Samples (low-high)** | **Highest Level Allowed (MCL)** | **Ideal Goal (MCLG)** | **Sample Date** |
| **Haloacetic Acids (HAA5)** (ppb) | No | 5.3 | < 1.0 – 5.3 | 60 | N/A | August 2015 |
| **Total Trihalomethanes (TTHM)** (ppb) | No | 18.0 | 5.7 – 18.0 | 80 | N/A | August 2015 |
| **LEAD AND COPPER**<br>Corrosion of household plumbing; erosion of natural deposits; Monitored once every 3-years. | **Exceeded Standard** | **90% of Sample Levels Were Less Than** | **Range of all Samples (low-high)** | **EPA's Action Level (AL)** | **Ideal Goal (ALG)** | **Sample Date** |
| **Lead** (ppb) | No | < 1[1]<br>0 samples exceeded AL | < 1 - 9.1 | 90% of locations less than 15 ppb | 0 | September 2015 |

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. Howard Cantonment Area 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 the 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.

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|---|---|---|---|---|---|---|
| **Copper** (ppm) | No | 0.260[1]<br>0 samples exceeded AL | 0.084 - 0.29 | 90% of locations less than 1.3 ppm | 1.3 | September 2015 |
| **RADIONUCLIDES**<br>Decay or erosion of natural deposits; Monitored once every 6-years. | **Exceeded Standard** | **Highest Level Detected** | **Range of all Samples (low-high)** | **Highest Level Allowed (MCL)** | **Ideal Goal (MCLG)** | **Sample Date** |
| **Alpha emitters** (pCi/L) | No | < 1 | Single Sample | 15 | 0 | March 2011 |
| **Combined Radium (226 & 228)** (pCi/L) | No | < 0.4 | Single Sample | 5 | 0 | March 2011 |
| **Combined Uranium (234, 235, 238)** (µg/L) | No | 1.6 ± 0.6 | Single Sample | 30 | 0 | March 2011 |
| **INORGANIC CONTAMINANTS** | **Exceeded Standard** | **Highest Level Detected** | **Range of all Samples (low-high)** | **Highest Level Allowed (MCL)** | **Ideal Goal (MCLG)** | **Sample Date** |
| **Asbestos** (MFL)<br>Decay of asbestos cement pipes; erosion of natural deposits; Monitored once every 9-years. | No | < 0.2 | Single Sample | 7 | 7 | March 2011 |
| **Arsenic** (ppb)<br>Erosion of natural deposits; runoff from orchards, runoff from glass and electronics production wastes; Monitored once every 3-years. | No | < 3 | Single Sample | 10 | 0 | January 2014 |
| **Fluoride** (ppm)<br>Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories; Monitored once every 3-years. | No | 0.44 | Single Sample | 4 | 4 | March 2014 |
| **Nitrate** (ppm)<br>Erosion of natural deposits; runoff from fertilizer use; leaching from septic tanks, sewage; Monitored annually. | No | < 0.1 | Single Sample | 10 | 10 | March 2015 |
| **Nitrite** (ppm)<br>Erosion of natural deposits; runoff from fertilizer use; leaching from septic tanks, sewage; Monitored once every 9-years. | No | < 0.02 | Single Sample | 1 | 1 | March 2011 |
| **ORGANIC CHEMICALS**[2] | **Exceeded Standard** | **Highest Level Detected** | **Range of all Samples (low-high)** | **Highest Level Allowed (MCL)** | **Ideal Goal (MCLG)** | **Sample Date** |
| **Volatile Organic Chemicals (VOCs)** (ppm, ppb)<br>Discharge from industrial and chemical processes; Monitored annually or quarterly [3]. | No | All less than detection limit | Single Sample | Varies from 1 to 700 depending on the listed chemical | Varies from 0 to 700 depending on the listed chemical | February 2015 |
| **Synthetic Organic Chemicals (SOCs)** (ppb, ppt, ppq)<br>Runoff from herbicides; discharge from industrial processes; Monitored annually or quarterly [3]. | No | All less than detection limit | Single Sample | Varies depending on the listed chemical | Varies depending on the listed chemical | February and April 2015 |
| **UNREGULATED SUBSTANCES** | **Exceeded Standard** | **Highest Level Detected** | **Range of all Samples (low-high)** | **Highest Level Allowed (MCL)** | **Ideal Goal (MCLG)** | **Sample Date** |
| **Sodium** [4] (ppm) | N/A | 46 | Single Sample | N/A | N/A | March 2014 |

**(1) This value represents the 90th percentile of the total number of samples collected in 2015.**
**(2) There are 21 VOCs and 33 SOCs regulated by EPA. A list of all VOCs and SOCs regulated by the EPA website is available at http://water.epa.gov/drink/contaminants.**
**(3) Four consecutive samples are required during each three year compliance period. If none of the listed VOCs or SOCs are detected then sampling may be performed once per year (annually) for the remainder of the compliance period.**
**(4) Sodium is not currently a regulated substance in drinking water; however, it is of interest to some people due to individual health concerns.**

### Additional Terms and Acronyms

**< Indicates the contaminant was not detected or was less than the laboratory reporting limit**
**N/A = No level detected or item is not applicable**
**pCi/L = picocuries per liter: picocuries per liter is a measure of radioactivity in water**
**ppm = Parts per million, or milligrams per liter (mg/L), (a unit of measure equivalent to a single penny in $10,000)**
**ppb = Parts per billion, or micrograms per liter (µg/L), (equivalent to a single penny in $10,000,000)**
**ppt = Parts per trillion (equivalent to a single penny in $10,000,000,000)**
**ppq = Parts per quadrillion (equivalent to a single penny in $10,000,000,000,000)**

**AL = Action Level**
**ALG = Action Level Goal**
**EPDS = Entry point to the distribution system**
**MFL = Million fibers per liter**
**PWS = Public Water System**
**SDWA = Safe Drinking Water Act; Federal law that sets forth drinking water regulations**

### Key Terms

**Maximum Contaminant Level (MCL)**
The highest level of a contaminant that is 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 highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**Maximum Residual Disinfectant Level Goal (MRDLG)**
The level of a drinking water disinfectant 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.