U.S. Army Garrison
Yuma Proving Ground
Attn: AMIM-YMP-E
301 C Street
Yuma, AZ 85365-9498

Water Consumer

USAYPG

Yuma, AZ 85365-9498

2020 Water Quality Report

Consumer Confidence Report

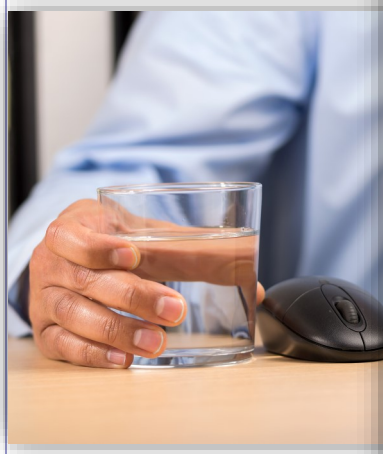
Walker Cantonment Area & Kofa Firing Range Water Systems

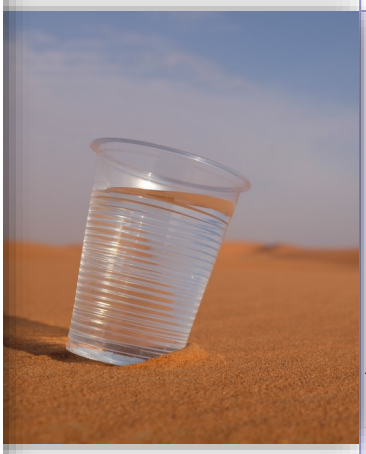
2020 Water Quality Report

Consumer Confidence Report

Walker Cantonment Area & Kofa Firing Range

Public Water Systems (14-363 & 14-367)





Please Note: *This Consumer Confidence Report (CCR) covers only the potable water systems servicing the Walker Cantonment Area (WCA), which also serves the Laguna Army Airfield Cantonment Area (LAAF), and Kofa Firing Range (KFR), which also serves Castle Dome Heliport (CDH) and Castle Dome Annex (CDA) Cantonment Areas, at U.S. Army Garrison (USAG) Yuma Proving Ground (YPG). 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 Abraham Cortes, Safe Drinking Water Program Manager, at (928) 328-2977, or Mark Schauer of the Yuma Proving Ground Public Affairs Office at (928) 328-6189.

Your 2020 Water Quality

CONSUMER CONFIDENCE REPORT

This report covers the two public water systems which serve:
Walker Cantonment Area (WCA) & Laguna Army Airfield (LAAF) (AZ04-14363), and
Kofa Firing Range (KFR), Castle Dome Heliport (CDH), & Castle Dome Annex (CDA) (AZ04-14367).

U.S. Army Garrison Yuma Proving Ground

Issued May 2021

Our Continuing Commitment to You

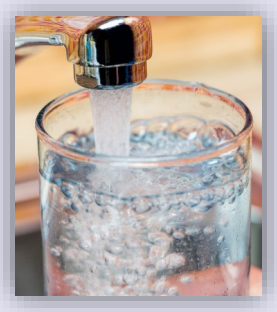
YPG and its trained, certified water quality professionals are committed to:

- Providing high quality, safe drinking water to its water consumers,
- Monitoring and testing the water we provide to ensure it is always safe to drink,
- Providing opportunities for water consumers to ask questions and learn during YPG's Safety Week, held each year in February, periodic YPG town hall meetings, and via articles in the YPG Outpost.

Inside this report:

Dear Valued Water Consumer,

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!*



YPG is proactive in providing safe, quality water to its water consumers throughout all three cantonment areas. Although this report's data covers the Walker Cantonment Area (WCA) and the Kofa Firing Range (KFR) water systems only, the general information is relevant to drinking water across the United States.

Our water systems provided drinking water that met all regulatory requirements during 2020.

If you have any questions about the quality of your water, please contact Abraham Cortes, Safe Drinking Water Program Manager, at **928-328-2977** or **Abraham.cortesramirez.civ@mail.mil**.

Thank you for taking interest in your drinking water.

Sincerely,

Your Public Works Directorate

Introduction

This is the 4th edition of the annual report for WCA and KFR water systems on the quality of water delivered by YPG.

Under the "Consumer Confidence Reporting Rule" of the Safe Drinking Water Act (SDWA), only community water systems (Howard Cantonment Area) are *required* to report this water quality information to the consuming public. However, as part of the ongoing water quality outreach program, YPG has chosen to provide a CCR for the additional public water systems (PWS) on YPG. Presented in this report is information on the source of our water, its constituents, and the health risks associated with any contaminants.

WCA and KFR are regulated as *Non-Transient, Non-Community water systems* because these water systems regularly supply water to at least 25 of the same people at least six months per year. This type of system requires less frequent monitoring of certain contaminants which other systems may have more often due to the consumers not residing within the water system full-time, therefore lessening the risk.

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 PWS's. The U.S. Food and Drug Administration (FDA) regulations also establish limits for contaminants in bottled water that provide the same protection for 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**.

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 stormwater 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 stormwater 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 stormwater runoff, or septic systems.

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

For any questions relating to YPG drinking water, please contact Abraham Cortes, Safe Drinking Water Program Manager.

(928) 328-2977
Abraham.cortesramirez.civ@mail.mil

FAQ: Frequently Asked Questions!

- **What if my water tastes, smells, or looks strange?**
  While certain things can affect the flavor, odor, and appearance of your tap water, not all of them are necessarily harmful. Many people can taste the chlorine added for safety. Contaminants like sulfur can impact the smell, while iron will cause discoloration and staining. The overall amount of total dissolved solids (TDS) in your tap water will affect the taste, smell, and appearance. While these issues are *not harmful*, they can certainly be a nuisance. The potentially harmful contaminants are monitored regularly and are included in this report.

- **Is bottled water safer and cleaner than tap water?**
  More than half of all bottled water comes from tap water that has been lightly treated. Some tap waters may not taste as pleasant as bottled waters; it does not mean the tap water is of poor quality. It may simply be due to chlorination or a higher mineral content. This means you could be wasting your money and creating unnecessary waste by drinking bottled water. Tap water, regulated by the EPA, is tested for contaminants more frequently than bottled water, which is regulated by the FDA.

- **How can I be sure my water is safe to drink?**
  The most trustworthy way to find out what's in your water and its safety is to send samples to a state-certified lab and have it tested. You can trust that YPG does this and follows all state, federal, and Army regulations for providing safe drinking water. If public water is ever unsafe to drink, the water system is obligated by law to inform its water users. In this case, no news is good news!

- **Are there filters that I can use?**
  Due to the complexity of our installation, tap filters are NOT recommended at YPG. The lack of proper upkeep can create an opportunity for harmful bacteria to grow, creating a problem that wasn't there before. All tap water YPG provides is safe to consume. Please review the data provided if you have concerns. If you choose to install a filter within your home, please follow manufacturer guidelines for replacing filters.

- **Who regulates the water we drink and where samples are taken?**
  The EPA, along with ADEQ, and the U.S. Army are in charge of overseeing the water that comes out of your taps within YPG. The EPA prescribes very specific rules that dictate where we sample for contaminants (both within buildings and at the water treatment plant). These rules seek to protect public health and tell us where to sample according to federal regulations. These selected sample locations are tracked and kept on file with ADEQ. If you have questions about sample locations, please contact Abraham Cortes.

What We Do At YPG

At YPG we monitor our non-transient, non-community water systems 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 2020 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, is 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.

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 the building's 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 building 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 WCA and KFR water system monitoring has historically shown lead levels below the Action Level (AL), due to the age of some buildings 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.

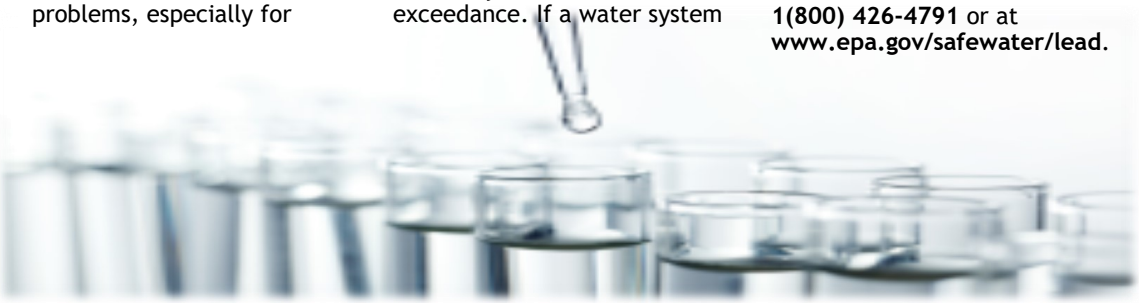
A single elevated result does not necessary mean an AL exceedance. If a water system exceeds the AL for lead, its consumers will be notified.

If your water has been sitting in your building's plumbing for over a day, 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 choose 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 choose 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**.

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 systems provided drinking water that met all regulatory requirements during 2020.



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.

YPG WCA and KFR water systems routinely test for the presence of coliform bacteria as an indicator of the sanitary quality of drinking water.

WCA and KFR water systems each analyzed 36 coliform samples in 2020, 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**.

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

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

Per- and Polyfluoroalkyl Substances (PFAS)

PFAS are man-made chemicals added to many industrial and consumer products to improve their performance because these chemicals increase resistance to heat, stains, water, and grease. Commercial and consumer use of PFAS started in the 1950s. PFAS are used to prevent food from sticking to cookware, making sofas and carpets resistant to stains, and making clothes and mattresses more waterproof. PFAS are also found in food packaging and firefighting materials.

PFAS can become a contaminant if found in public water systems, drinking water wells, soil, surface and groundwater and outdoor air near industrial sources or areas with frequent PFAS use, and other areas in the environment. In 2016, the U.S. EPA issued a lifetime Health Advisory (HA) for the PFAS chemicals, PFOS (perfluorooctane sulfonate) and PFOA (perfluorooctanoic acid) in drinking water of 70 parts per trillion (ppt). For context, one (1) ppt is equivalent to one (1) drop of water in 20 Olympic-sized swimming pools.

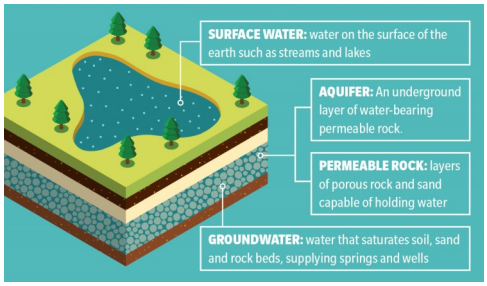
The U.S. Army has required YPG to sample drinking water for PFAS since 2016. The results are provided to you on Page 7. If you have any questions, please contact **Abraham Cortes**, **(928) 328-2977**, **abraham.cortesramirez.civ@mail.mil**.
For more information, please visit **https://www.epa.gov/pfas**.

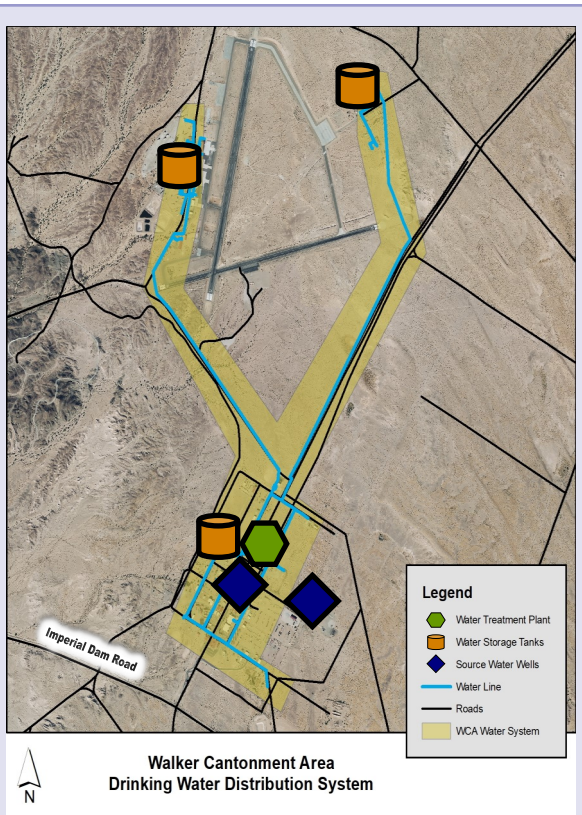
Arizona Source Water Assessment Program

The Source Water Assessment Program (SWAP) is an evaluation of water sources that provide recreational and drinking water to PWS's. This evaluation is used to determine the degree to which a PWS is protected, or at risk from contamination. The assessment examines the possible migration of contaminants from use of land bordering the watershed. It is unlikely, at this time, that the source our aquifer draws from is susceptible to contamination from adjacent land uses. More information on Arizona's Source Water Protection Program is available at **https://azdeq.gov/source-water-protection**.

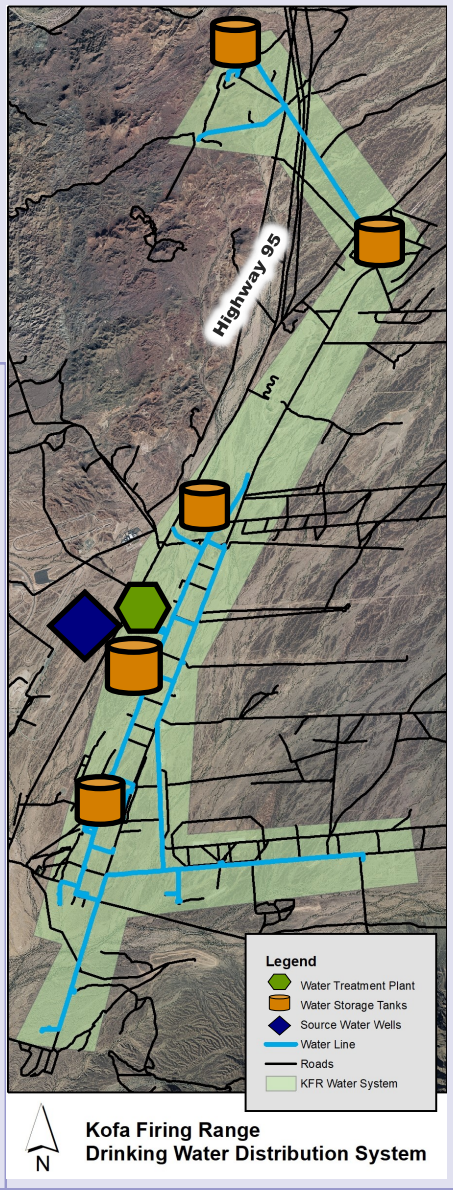
The Source of Your Drinking Water

Our water supply for WCA and KFR water systems 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 located near each water treatment plant. These wells range in depth from approximately 300 feet to 500 feet. Although the minimum depth to groundwater is about 160 feet at WCA and 250 feet at KFR, our tap water is drawn from approximately 250 to 450 feet below the ground surface, respectively. The pumped water is then treated through an electrodialysis reversal (EDR) unit at both WCA and KFR treatment plants 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.





Walker Cantonment Area
Drinking Water Distribution System



Kofa Firing Range
Drinking Water Distribution System

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:

- Dispose of chemicals properly,
- Take used petroleum wastes and other chemicals to the YPG Hazardous Waste Management Facility **(ext. 2828)**,
- Do not dump anything that may contain hazardous chemicals down a stormwater drain, as it can reach your drinking water source.

2020 Walker Cantonment Area Water System Drinking Water Results

Parameter	Units	Highest Level Allowed (EPA's MCL)	Ideal Goal (EPA's MCLG)	WCA 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 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 2020 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	1.66	0.02 - 1.66 Average: 0.74	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	46	7.2 - 46	No	September 2020	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	5.4	1.0 - 5.4	No	September 2020	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: 11 90th Percentile: 0.0056	0.42 - 11	No	July 2020	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.
Copper	ppm	AL = 1.3	1.3	Highest Level Detected: 0.04 90th Percentile: 0.027	0.0034 - 0.04	No	July 2020	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.
Inorganic Chemicals										
Antimony	ppb	6	6	0.31	Single Sample	No	March 2020	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.
Arsenic	ppb	10	0	2.9	1.8 - 2.9	No	Quarterly 2020	Once every quarter	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.
Nitrate	ppm	10	10	0.22	Single Sample	No	March 2020	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.

Parameter	Units	Secondary Standard (EPA's Recommended Highest Level)	WCA 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 ***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.***									
pH	NA	6.5-8.5	9.15	7.80 - 9.15 Average: 8.53	Yes[1]	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	459	137 - 459 Average: 209	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.

[1]YPG continuously monitors the pH levels within the distribution system. Although it is not harmful to your health, higher pH levels may affect the aesthetics of the water.

Parameter	Units	EPA's Recommended Highest Level	WCA Highest Level	Range/ Average	Exceeded Recommended Standard	Sample Date	Monitoring Frequency	Major Sources in Drinking Water	Noticeable Effects Above the Secondary Level
Unregulated Contaminants									
Per- and Polyfluoroalkyl Substances (PFAS)	ppt	70 (Lifetime Health Advisory; for PFOA/PFOS only)	ND	Single Sample	No	August 2020	Annual	There are a variety of ways that people can be exposed to these chemicals and at different levels of exposure. Drinking water can be a source of exposure in communities where these chemicals have contaminated water supplies. Such contamination is typically localized, for example, an industrial facility where PFAS were produced or used, or an oil refinery, airfield or other location at which PFAS were used for firefighting.	Scientists are still learning about the potential health effects from PFAS exposure. Some studies have shown that certain PFAS may increase the risk of cancer, affect the immune system and impact children's development.

2020 Kofa Firing Range Water System Drinking Water Results

Parameter	Units	Highest Level Allowed (EPA's MCL)	Ideal Goal (EPA's MCLG)	KFR 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 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 2020 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	1.56	0.04 - 1.56 Average: 0.94	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	67	21 - 67	No	August 2020	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	5.2	1.4 - 5.2	No	August 2020	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: 17 90th Percentile: 5.6	0.32 - 17	No[1]	July 2020	Annually	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.
Copper	ppm	AL = 1.3	1.3	Highest Level Detected: 0.18 90th Percentile: 0.027	0.0048 - 0.18	No	July 2020	Annually	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.
Inorganic Chemicals										
Antimony	ppb	6	6	0.96	Single Sample	No	March 2020	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.
Arsenic	ppb	10	0	9.3	6.9 - 9.3	No	Quarterly 2020	Once every quarter	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.
Mercury	ppb	2	2	0.097	Single Sample	No	March 2020	Once every 3 years	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland	Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.
Nitrate	ppm	10	10	0.15	Single Sample	No	March 2020	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.

[1]The level for lead at which a water system must take additional regulatory action is 15 ppb. This means the primary standard is only exceeded if more than 10% of the samples (i.e. 90th Percentile level) show lead levels higher than 15 ppb. In WCA's case, only one building showed elevated levels of lead and was determined to be due to low usage of building water during COVID-related telework.

Parameter	Units	Secondary Standard (EPA's Recommended Highest Level)	KFR 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 ***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.***									
pH	NA	6.5-8.5	9.52	7.27 - 9.52 Average: 8.72	Yes [2]	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	478	249 - 478 Average: 370	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.

[2]YPG continuously monitors the pH levels within the distribution system. Although it is not harmful to your health, higher pH levels may affect the aesthetics of the water.

Parameter	Units	EPA's Recommended Highest Level	KFR Highest Level	Range/ Average	Exceeded Recommended Standard	Sample Date	Monitoring Frequency	Major Sources in Drinking Water	Noticeable Effects Above the Secondary Level
Unregulated Contaminants									
Per- and Polyfluoroalkyl Substances (PFAS)	ppt	70 (Lifetime Health Advisory; for PFOA/ PFOS only)	ND	Single Sample	No	August 2020	Annual	There are a variety of ways that people can be exposed to these chemicals and at different levels of exposure. Drinking water can be a source of exposure in communities where these chemicals have contaminated water supplies. Such contamination is typically localized, for example, an industrial facility where PFAS were produced or used, or an oil refinery, airfield or other location at which PFAS were used for firefighting.	Scientists are still learning about the potential health effects from PFAS exposure. Some studies have shown that certain PFAS may increase the risk of cancer, affect the immune system and impact children's development.

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) 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/Acronyms

<	Indicates the contaminant was not detected or was less than the laboratory reporting limit
ADEQ	Arizona Department of Environmental Quality
ADHS	Arizona Department of Health Services
AL	Action Level
CCR	Consumer Confidence Report; annual water quality report
CDA	Castle Dome Annex
CDC	Center for Disease Control
CDH	Castle Dome Heliport
EDR	Electrodialysis reversal
EPA	United States Environmental Protection Agency
EPDS	Entry point to the distribution system
FDA	U.S. Food and Drug Administration
KFR	Kofa Firing Range
LAAF	Laguna Army Airfield
MCL	Maximum Contaminant Level
MRDL	Maximum Residual Disinfectant Level
MRDLG	Maximum Residual Disinfectant Level Goal
N/A	Not Applicable: no State or Federal standards are established
ND	None Detected: sample was taken and chemical was not detected
NPDWR	National Primary Drinking Water Regulation
pCi/L	picocuries per Liter; a measure of radioactivity in water
PFAS	Per- and Polyfluoroalkyl Substances
ppb	Parts per billion
ppm	Parts per million
ppt	Parts per trillion
PWS	Public water system
SDWA	Safe Drinking Water Act; federal law that sets forth drinking water regulations
SWAP	Source Water Assessment Program
TDS	Total dissolved solids
USAG	United States Army Garrison
WCA	Walker Cantonment Area
YPG	Yuma Proving Ground

www.

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Please visit
https://ypg-environmental.com/files/WCA_KFR_2020_CCR.pdf

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

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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)