

Marine Corps Air Station Yuma Arizona



2023 Annual Drinking Water Report

The Water We Drink

The Environmental Protection Agency Safe Drinking Water Act and Arizona Dept. of Environmental Quality Drinking Water Rules require community water systems to provide an annual Consumer Confidence Report (CCR) to inform you about your drinking water. The water treatment professionals at Marine Corps Air Station (MCAS) Yuma are proud to provide you with this 2023 Annual Drinking Water Quality Report. We care for your water, we staff the MCAS Yuma Public Work Division with water treatment and water distribution system operators who are licensed and meet all state certification requirements. As in the past years, your tap water in 2023 met all federal and state drinking water quality standards. The 2023 CCR provides general information about your MCAS Yuma water.

Where Does Our Water Come From?

MCAS Yuma's main drinking water source is surface water, which comes from the Colorado River via a canal system. The water system also operates a groundwater well which is used, as needed, to blend with the surface water to improve water quality. MCAS Yuma owns the land around the well and restricts activities to minimize impact.

Source Water Assessment

Based on the information currently available on the hydro geologic settings and the adjacent land uses that are in the specified proximity of the drinking water sources of this public water system, the Arizona Department of Environmental Quality (ADEQ) has given a high-risk designation for the degree to which this public water system drinking water sources are protected. A designation of high risk indicates there may be additional protection measures for source water implemented at the local level. This does not imply that the source water is contaminated, nor does it mean that contamination is imminent. Rather, it simply states that land use activities or hydro geologic conditions exist that make the source water susceptible to possible future contamination. The complete assessment is available from ADEQ at 1110 W. Washington, Phoenix, Arizona 85007. Electronic copies are available at <https://legacy.azdeq.gov/environ/water/dw/swap.html>.

Water Quality Monitoring

To ensure continued safety of the drinking water, MCAS Yuma tests your water weekly, monthly, and annually. In addition to monitoring for contaminants with established drinking water standards, the base also monitors for unregulated contaminants, which helps the U.S. Environmental Protection Agency (USEPA) determine where certain contaminants occur and whether such contaminants require regulation. Last year, MCAS Yuma performed water quality tests to evaluate compliance for over 100 different drinking water contaminants. All contaminants registered below detectable levels or below Maximum Contamination levels set by the USEPA; the table in the pamphlet provides a summary of these results.

General Information about Drinking Water

The sources of drinking water include rivers, reservoirs, 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. Some contaminants in source water may 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 may result from storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides may come from a variety of sources, such as agriculture, urban storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, may also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or may be results of oil and gas production and mining activities.

To ensure that tap water is safe to drink, the USEPA prescribes regulations limiting certain contaminants in water provided by public water systems. However, drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk. Some people may be more vulnerable than the general population to contaminants in drinking water. Immunocompromised persons, such as people with cancer undergoing chemotherapy, persons who have undergone organ transplants, other immune system disorders, elderly, and infants can be particularly at risk from infections. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to reduce the risk of infection from *Cryptosporidium* and other microbial sources are available the Safe Drinking Water Hotline (800-426-4791).

Per- and Polyfluoroalkyl substances (PFAS)

What are per- and polyfluoroalkyl substances and where do they come from?

Per- and polyfluoroalkyl substances (PFAS) are a group of thousands of man-made chemicals. PFAS have been used in a variety of industries and consumer products around the globe, including in the U.S., since the 1940s. PFAS have been used to make coatings and products that are used as oil and water repellents for carpets, clothing, paper packaging for food, and cookware. They are also contained in some foams (aqueous film-forming foam or AFFF) currently used for fighting petroleum fires at airfields and in industrial fire suppression processes. PFAS chemicals are persistent in the environment, and some are persistent in the human body – meaning they do not break down and they can accumulate over time.

Is there a regulation for PFAS in drinking water?

On April 10, 2024, the US EPA established MCLs for a subset of PFAS chemicals. EPA requires implementation of sampling in accordance with the new MCLs within three years of the publication date and implementation of any required treatment within five years. These limits did not apply for the 2023 calendar year because they had not been published. However, the DoD proactively promulgated policies to monitor drinking water for PFAS at all service owned and operated water systems at a minimum of every two years. The DoD policy states that if water sampling results confirm that drinking water contains PFOA and PFOS at individual or combined concentrations greater than the 2016 EPA health advisory (HA) level of 70 ppt, water systems must take immediate action to reduce exposure to PFOS or PFAS. For levels less than 70 ppt but above the 4 ppt level (draft at the time of policy publication), DoD committed to planning for implementation of the levels once EPA's published MCLs take effect.

Lead in drinking water

Sampling of residential taps during 2021 achieved standards for lead in drinking water; federal regulations require us to communicate the following health advisory regarding lead in drinking water: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and children. Lead in drinking water is primarily from materials associated with service lines and home plumbing. MCAS Yuma is responsible for providing high-quality drinking water but cannot control the variety of materials used in plumbing components. You can minimize the potential for lead exposure by flushing your tap for thirty seconds to two minutes before using water for drinking or cooking. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at www.epa.gov/safewater/lead.

What If I Have Questions About My Drinking Water?

If you have questions about this report or your drinking water supply, please, contact Mr. Ronald L Kruse, Installation & Logistics Department, Public Works Director at (928) 269-3523. MCAS Yuma's Public Water System Identification (PWS ID) Number is AZ0414082. Copies of this report will be available at the Water Treatment Plant, Family Housing Office or at <https://www.mcasyuma.marines.mil/>.

Understanding the Language of Water

AL = ACTION LEVEL - THE CONCENTRATION OF A CONTAMINANT WHICH, IF EXCEEDED, TRIGGERS TREATMENT OR OTHER REQUIREMENTS.
MCL = MAXIMUM CONTAMINANT LEVEL - THE "MAXIMUM ALLOWED" IS THE HIGHEST LEVEL OF A CONTAMINANT THAT IS ALLOWED IN DRINKING WATER. MCL'S ARE SET AS CLOSE TO THE MCLGS AS FEASIBLE USING THE BEST AVAILABLE TREATMENT TECHNOLOGY.
MCLG = MAXIMUM CONTAMINANT LEVEL GOAL - THE "GOAL" IS THE LEVEL OF A CONTAMINANT IN DRINKING WATER BELOW WHICH THERE IS NO KNOWN OR EXPECTED RISK TO HEALTH.
MFL = MILLION FIBERS PER LITER. **MRDL = MAXIMUM RESIDUAL DISINFECTANT LEVEL**. **MRDLG = MAXIMUM RESIDUAL DISINFECTANT LEVEL GOAL**.
MREM = MILLIREMS PER YEAR - A MEASURE OF RADIATION ABSORBED BY THE BODY. **NA = NOT APPLICABLE**. SAMPLING WAS NOT COMPLETED BY REGULATION OR WAS NOT REQUIRED.
NTU = NEPHELOMETRIC TURBIDITY UNITS, A MEASURE OF WATER CLARITY. **PC/L = PICOCURIES PER LITER** - PICOCURIES PER LITER IS A MEASURE OF THE RADIOACTIVITY IN WATER.
PPM = PARTS PER MILLION OR MILLIGRAMS PER LITER (MG/L).
PPB = PARTS PER BILLION OR MICROGRAMS PER LITER (µG/L).
PPT = PARTS PER TRILLION OR NANOGRAMS PER LITER.
PPQ = PARTS PER QUADRILLION OR PICOGRAMS PER LITER.
NG/L = NANOGRAM PER LITER.
TT = TREATMENT TECHNIQUE - A TREATMENT TECHNIQUE IS A REQUIRED PROCESS INTENDED TO REDUCE THE LEVEL OF A CONTAMINANT IN DRINKING WATER.
NON-DETECT - A NON-DETECT MEANS THE LAB DID NOT SEE THE ANALYTE OR THE QUANTITATIVE RESULT WAS LESS THAN THE LABORATORY'S LIMIT OF DETECTION

ppm x 1000 = ppb
ppb x 1000 = ppt
ppt x 1000 = ppq

(MG/L).
(µG/L).
LITER.
LITER.

Contaminant (units)	Violation Y / N	Running annual Average (RAA) or Highest Level Detected	Range Detected or (A) Absent / (P) Present	MCL	MCLG	Sample Month Year	Likely Source of Contamination
Microbiological							
Total Coliform Bacteria (System takes ≤ 40 monthly samples)	No	0	A	Varies	0	7 per month	Naturally Present in Environment
Fecal coliform and E. Coli	No	0	A	Varies	0		Human and animal fecal waste
Turbidity (NTU), surface water only	No	0.099 (RAA)	Range 0.075 to 0.155	None	n/a	Daily	Soil Runoff
Disinfectants							
Chlorine (ppm)	No	0.59 (RAA)	0.30 to 0.95	MRDL = 4	MRDLG = 4	Continuous	Water additive used to control microbes
Disinfection By-Products							
Haloacetic Acids (ppb) (HAA5)	No	13.0 (RAA)	10.0 to 14.0	60	n/a	Quarterly	Byproduct of drinking water disinfection
Total Trihalomethanes (ppb) (TTHM)	No	61 (RAA)	52 - 65	80	n/a	Quarterly	Byproduct of drinking water disinfection
Lead & Copper							
90 th Percentile Sites Above AL/Total Sites Action Level							
Copper (ppm)	No	0.32 0/20	.011 - 0.67	1.3	0	08/2021	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	No	2.4 1/20	1.2 - 38	15	0	08/2021	Corrosion of household plumbing systems; erosion of natural deposits
Radionuclides							
Alpha emitters (pCi/L)	No	4.4	P	15	0	04/2023	Erosion of natural deposits
Combined Radium 226 & 228 (pCi/L)	No	.346	P	5	0	04/2023	Erosion of natural deposits
Uranium (ug/L)	No	6.32	P	30	0	04/2023	Erosion of natural deposits
Inorganics							
Barium (mg/L)	No	.066	P	2.0	0	2/2020	Erosion of Natural deposits
Arsenic (ug/L)	No	1.4	P	10	0	2/2020	Erosion of natural deposits, runoff from orchards, runoff from glass & electronics production wastes
Nitrate (mg/L)	No	1.7	P	10	0	3/2023	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Fluoride (mg/L)	No	0.54	P	4.0	0	2/2020	Erosion of Natural deposits
Special Monitoring Contaminants							
Sodium	No	200	P	N/A	0	3/2023	Erosion of Natural deposits
Monitoring Required by DOD (PFOS/PFOA)							
Location		PFOS Results	PFOA Results	NL (HA)	PHG	Date	Typical Sources
Main Base – MCAS Yuma	No	0.88ppt	2.3ppt	70ppt	None	Quarterly	Industrial Use Chemical
Cannon Air Defense Complex	No	14ppt	8.7ppt	70ppt	None	Quarterly	Industrial Use Chemical
Martinez Lake	No	ND	ND	70ppt	None	Quarterly	Industrial Use Chemical

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Monitoring Requirements Not Met for PWS ID 14082

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether our drinking water meets health standards.

What should I do?

Nothing needs to be done by you at this time.

The table below lists the untimely reports, or samples which were improperly tested during 2023 with explanations for each error, timeframes in which they occurred, and the corrective actions taken to remedy the error.

Violation Type	Explanation, Health Effects	Time Period	Corrective Actions
Missed Monitoring	Due to a lab analytical error, Disinfection Byproducts HAA5 and TTHM needed to be resampled. We resampled for TTHM but did not resample HAA5 during the allotted timeframe in 2023.	2023	Established procedures with Laboratory to prevent sample shipping and Laboratory processing delay's
Late Reporting	We submitted Chlorine sample reports late to ADEQ	April-June 2023	We submitted the data to ADEQ within one week of the passed deadline and submitted subsequent reports on time.