2024 Columbus AFB Drinking Water Quality Report

We are pleased to present the 2024 Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. This report is a snapshot of last year's water quality. We are committed to providing you with information because informed customers are our best allies.

Sections of this document have required language generated by the Mississippi State Department of Health. This mandated language is compiled alongside base specific information and sampling results. Guidance for this report is published on https://pws.mswater.us/. Additional information can be found by accessing Columbus Light & Water's (CL&W) 2024 Consumer Confidence Report.

Spanish (Espanol)
Este informe contiene informacion muy importante sobre la calidad de su agua potable. Por favor lea este informe o comuniquese con alguien que pueda traducir la informacion.

Is my water tested for contaminants?
Drinking Water on Columbus AFB is routinely monitored for contaminants according to federal and state laws. All samples for the Columbus AFB distribution system are taken by the Bioenvironmental Engineering Flight and analyzed by the Mississippi State Department of Health. Additional sampling is completed by the water provider, Columbus Light and Water Company (CL&W). All results for 2024 are summarized in the Water Quality Data Table below.

Do I need to take special precautions?
Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised people such as people undergoing chemotherapy, people 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 Centers for Disease Control 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).

Where does my water come from?
The Columbus AFB water supply is treated and distributed by CL&W. The water is drawn from eight wells supplied by the lower Tuscaloosa Aquifer, a groundwater source, and is stored in various places on base, e.g., water towers. No further treatment is done by base personnel.

Source water assessment and its availability
An inspection of the Columbus AFB water supply in Lowndes County was completed on 26 June 2023 for compliance with the Ground Water Rule. Columbus AFB water supply received an overall capacity rating of 5.0 out of a possible 5.0 points. The next Sanitary Survey for compliance of the Ground Water Rule will be carried out in 2025. No significant deficiencies were identified during this inspection.

Why would there be contaminants in my drinking water?
Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).

Lead service line inventory statement
The Columbus AFB water system has completed the Lead Service Line Inventory, and no lead lines were found. The methods used to make that determination were visual inspections completed by the 14 Civil Engineering Squadron.

Lead Educational Statement
This statement is generated and required by the Mississippi State Department of Health.

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. Columbus Air Force Base is responsible for providing high quality drinking water and removing lead pipes but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact Bioenvironmental Engineering at 662-434-2284.

Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at http://www.epa.gov/safewater/lead. The MS Public Health Laboratory (MPHL) can provide information on lead and copper testing and/or other laboratories certified to analyze lead and copper in drinking water. MPHL can be reached at 601-576-7582 (Jackson, MS).

Fluoridation
To comply with the "Regulation Governing Fluoridation of Community Water Supplies", CL&W is required to report certain results pertaining to fluoridation of our water system. The number of months in the previous calendar year in which average fluoride sample results were within the optimal range of 0.6 – 1.2 parts per million (ppm) was **11.** The percentage of fluoride samples collected in the previous calendar year within the optimal range of 0.6 - 1.2 ppm was **100%**. The number of months that samples were collected and analyzed in the previous calendar year was **11**.

Total Coliform
Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other potentially harmful bacteria may be present. If coliforms were found in more samples than allowed, it would indicate a warning of potential problems.

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 industrial 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, food packaging, and cookware. They are also contained in some fire-fighting foams such as aqueous film-forming foam, or AFFF, used for fighting petroleum fires.

Is there a federal regulation for PFAS in drinking water?
On April 26, 2024, the EPA published a final National Primary Drinking Water Regulation for certain PFAS under the SDWA. This rule went into effect on June 25, 2024, with a compliance deadline of April 26, 2029, five years from the date up publication. While the rule requires routine sampling for certain PFAS by no later than 2027, DoD has been sampling drinking water for PFAS compounds at all DoD-owned and operated water systems since 2017. Under the new rule, the following limits, called Maximum Contaminant Levels (MCL), were established, and DoD water systems will need to meet these levels by April 2029.

PFAS	MCL
PFOA	4.0 ppt
PFOS	4.0 ppt
PFHxS	10 ppt
HFPO-DA (GenX)	10 ppt
PFNA	10 ppt
PFBS	n/a
Mixture of two or more: PFHxS, PFNA, HFPO-DA, and PFBS[1]	HI of 1 (unitless)

*Acronyms can be found in the Regulated Contaminant Table

Has Columbus AFB tested its water for PFAS?
Yes. In October 2021 samples were collected from the Columbus AFB Clear Well and the Shuqualak Fire Department. We are informing you that drinking water testing results were below the MCL for all 6 PFAS compounds covered by the EPA drinking water rule, including PFOA and PFOS. The water system will be periodically resampled as required by the EPA PFAS drinking water rule to ensure continued compliance.

Prior Columbus AFB Consumer Confidence Reports have stated PFAS compounds would be tested every 3 years. This has since been updated and further guidance will determine future sampling requirements.

Water Quality Data Table

To ensure that tap water is safe to drink, EPA prescribes regulations which limit the number of contaminants in water provided by public water systems. The table below lists all the drinking water contaminants that were detected during the calendar year of this report. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires monitoring for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In this table, you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we've provided the definitions below the table.

Regulated Contaminants

Contaminants	MCLG	MCL	Your Water	Range		Sample Date (Frequency)	Violation	Typical Source
				Low	High			
Disinfectants & Disinfectant By-Products								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)								
Haloacetic Acids (HAA5) (ppb)	NA	60	1.43	NA	NA	28 May 24 (Annually)	No	By-product of chlorination
TTHMs [Total Trihalomethanes] (ppb)	NA	80	9.23	NA	NA	28 May 24 (Annually)	No	By-product of disinfection
Chlorine (as Cl2) (mg/L)	4	4	1.40	0.43	1.74	Monthly 24'	No	Water additive for microbial control

Contaminants	MCLG	MCL	Your Water	Sample Date (Frequency)	Violation	Typical Source
Inorganic Contaminants						
Barium (ppm)	2	2	0.0078	27 Sep 2022 (Every 3 years)	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Antimony (ppm)	0.006	0.006	<0.0005	27 Sep 2022 (Every 3 years)	No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic (ppm)	0	0.010	<0.0005	27 Sep 2022 (Every 3 years)	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Beryllium (ppm)	0.004	0.004	<0.0005	27 Sep 2022 (Every 3 years)	No	Discharge from metal refineries and coal-burning factories; Discharge from electrical, aerospace, and defense industries
Cyanide (ppm)	0.2	0.2	<0.015	9 May 2022 (Every 3 years)	No	Discharge from steel metal factories; discharge from plastic and fertilizer factories
Cadmium (ppm)	0.005	0.005	<0.0005	27 Sep 2022 (Every 3 years)	No	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; Runoff from waste batteries and paints
Chromium (ppm)	0.1	0.1	<0.0005	27 Sep 2022 (Every 3 years)	No	Discharge from steel and pulp mills; Erosion of natural deposits

Mercury (ppm)	0.002	0.002	<0.0005	27 Sep 2022 (Every 3 years)	No	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills and cropland
Fluoride (ppm)	4	4	0.689	27 Sep 2022 (Every 3 years)	No	Water additive which promotes strong teeth, Discharge from fertilizer and aluminum factories
Selenium (ppm)	0.05	0.05	<0.0005	27 Sep 2022 (Every 3 years)	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Thallium (ppm)	0.0005	0.002	<0.0005	27 Sep 2022 (every 3 years)	No	Leaching from ore-processing sites; Discharge from electronics, glass, and drug factories
Nitrate (ppm)	10	10	<0.08	19 Mar 2024 (Annually)	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrite (ppm)	1	1	<0.02	19 Mar 2024 (Annually)	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrate-Nitrite (ppm)	N/A	10	<0.1	19 Mar 2024 (Annually)	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Microbiological Contaminants						
Total Coliform (positive samples/month)	0	0	0	Monthly 2024	No	Naturally present in the environment

Radioactive Contaminants						
Combined Uranium (ppb)	0	30	<0.5	2018 (Every 9 years)	No	Erosion of natural deposits
Radium (combined 226/228) (pCi/L)	0	5	<0.4	2019 (Every 9 years)	No	Erosion of natural deposits
Gross Alpha (pCi/L)	0	15	0.76	2019 (Every 9 years)	No	Erosion of natural deposits
Volatile Organic Compounds						
1,2,4-Trichlorobenzene (ppb)	70	70	<0.5	27 Jun 22 (Every 6 years)	No	Discharge from textile factories
cis-1,2-Dichloroethylene (ppb)	70	70	<0.5	27 Jun 22 (Every 6 years)	No	Discharge from chemical factories
Xylenes, Total (ppb)	10000	10000	<0.5	27 Jun 22 (Every 6 years)	No	Discharge from petroleum and chemical factories
Dichloromethane (ppb)	0	5	<0.5	27 Jun 22 (Every 6 years)	No	Discharge from drug and chemical factories
o-Dichlorobenzene (ppb)	600	600	<0.5	27 Jun 22 (Every 6 year)	No	Discharge from chemical factories
p-Dichlorobenzene (ppb)	75	75	<0.5	27 Jun 22 (Every 6 years)	No	Discharge from chemical factories
Vinyl Chloride (ppb)	0	2	<0.5	27 Jun 22 (Every 6 years)	No	Leaching from PVC pipes; Discharge from plastic factory
1,1 Dichloroethylene (ppb)	7	7	<0.5	27 Jun 22 (Every 6 years)	No	Discharge from chemical factories
trans-1,2-Dichloroethylene (ppb)	100	100	<0.5	27 Jun 22 (Every 6 years)	No	Discharge from chemical factories
1,2-Dichloroethane (ppb)	0	5	<0.5	27 Jun 22 (Every 6 years)	No	Discharge from chemical factories
1,1,1-Trichloroethane (ppb)	200	200	<0.5	27 Jun 22 (Every 6 years)	No	Discharge from metal degreasing sites and other factories
Carbon Tetrachloride (ppb)	0	5	<0.5	27 Jun 22 (Every 6 years)	No	Discharge from chemical plants and other industrial activities
1,2-Dichloropropane (ppb)	0	5	<0.5	27 Jun 22 (Every 6 years)	No	Discharge from chemical factories

Trichloroethylene (ppb)	0	5	<0.5	27 Jun 22 (Every 6 years)	No	Discharge from metal degreasing sites and other factories
1,1,2-Trichloroethane (ppb)	3	5	<0.5	27 Jun 22 (Every 6 years)	No	Discharge from chemical factories
Tetrachloroethylene (ppb)	0	5	<0.5	27 Jun 22 (Every 6 years)	No	Discharge from factories and dry cleaners
Chlorobenzene (ppb)	100	100	<0.5	27 Jun 22 (Every 6 years)	No	Discharge from chemical and agricultural chemical factories
Benzene (ppb)	0	5	<0.5	27 Jun 22 (Every 6 years)	No	Discharge from factories; Leaching from gas storage tanks and landfills
Toluene (ppb)	1000	1000	<0.5	27 Jun 22 (Every 6 years)	No	Discharge from petroleum factories
Ethylbenzene (ppb)	700	700	<0.5	27 Jun 22 (Every 6 years)	No	Discharge from petroleum refineries
Styrene (ppb)	100	100	<0.5	27 Jun 22 (Every 6 years)	No	Discharge from rubber and plastic factories; Leaching from landfills

Contaminants	**MCLG**	**ACL**	**Your Water**	**Sample Date (Frequency)**	**# Above ACL**	**Violation**	**Source**
Inorganic Contaminants							
Copper (mg/L) (20 samples taken)	0	1.3	0.0266	14 August 24 (Every 3 years)	0	No	Corrosion of household plumbing systems; erosion of natural deposits
Lead (mg/L) (20 samples taken)	0	0.015	<0.0005	14 August 24 (Every 3 years)	0	No	Corrosion of household plumbing systems; erosion of natural deposits

Contaminants	MCLG	MCL	Your Water	Sample Date (Frequency)	Violation	Typical Source
Per- and polyfluoroalkyl substances (PFAS)						
Perfluorooctanesulfonic Acid (PFOS) (ng/L)	2	2	0.2	25 Oct 21 (Awaiting Guidance)	No	Discharge from a group of manmade chemicals used for a variety of residential, commercial, and industrial purposes
Perfluorooctanoic acid (PFOA) (ng/L)	2	2	0.5	25 Oct 21 (Awaiting Guidance)	No	Discharge from a group of manmade chemicals used for a variety of residential, commercial, and industrial purposes
Hexafluoropropylene oxide dimer acid (HFPO-DA) (ng/L)	2	2	0.6	25 Oct 21 (Awaiting Guidance)	No	Discharge from a group of manmade chemicals used for a variety of residential, commercial, and industrial purposes
N-Ethylperfluorooctanesulfonamidoacetic Acid (ng/L)	2	2	0.3	25 Oct 21 (Awaiting Guidance)	No	Discharge from a group of manmade chemicals used for a variety of residential, commercial, and industrial purposes
N-Methylperfluorooctanesulfonamidoacetic Acid	2	2	0.5	25 Oct 21 (Awaiting Guidance)	No	Discharge from a group of manmade chemicals used for a variety of residential, commercial, and industrial purposes
Perfluorobutanesulfonic Acid (PFBS)	2	2	0.3	25 Oct 21 (Awaiting Guidance)	No	Discharge from a group of manmade chemicals used for a variety of residential, commercial, and industrial purposes

Perfluorodecanoic Acid (PFDA)	2	2	0.7	25 Oct 21 (Awaiting Guidance)	No	Discharge from a group of manmade chemicals used for a variety of residential, commercial, and industrial purposes
Perfluorododecanoic Acid (PFDoA)	2	2	0.4	25 Oct 21 (Awaiting Guidance)	No	Discharge from a group of manmade chemicals used for a variety of residential, commercial, and industrial purposes
Perfluoroheptanoic Acid (PFHpA)	2	2	0.5	25 Oct 21 (Awaiting Guidance)	No	Discharge from a group of manmade chemicals used for a variety of residential, commercial, and industrial purposes
Perfluorohexanesulfonic Acid (PFHxS)	2	2	0.3	25 Oct 21 (Awaiting Guidance)	No	Discharge from a group of manmade chemicals used for a variety of residential, commercial, and industrial purposes
Perfluorohexanoic Acid (PFHxA)	2	2	0.6	25 Oct 21 (Awaiting Guidance)	No	Discharge from a group of manmade chemicals used for a variety of residential, commercial, and industrial purposes
Perfluorononanoic Acid (PFNA)	2	2	0.5	25 Oct 21 (Awaiting Guidance)	No	Discharge from a group of manmade chemicals used for a variety of residential, commercial, and industrial purposes

9Cl-PF3ONS	2	2	0.2	25 Oct 21 (Awaiting Guidance)	No	Discharge from a group of manmade chemicals used for a variety of residential, commercial, and industrial purposes
4,8-Dioxa-3H-perfluorononanoic Acid (DONA)	2	2	0.3	25 Oct 21 (Awaiting Guidance)	No	Discharge from a group of manmade chemicals used for a variety of residential, commercial, and industrial purposes
Perfluorotetradecanoic Acid (PFTeA)	2	2	0.5	25 Oct 21 (Awaiting Guidance)	No	Discharge from a group of manmade chemicals used for a variety of residential, commercial, and industrial purposes
Perfluorotridecanoic Acid (PFTriA)	2	2	0.3	25 Oct 21 (Awaiting Guidance)	No	Discharge from a group of manmade chemicals used for a variety of residential, commercial, and industrial purposes
Perfluoroundecanoic Acid (PFUnA)	2	2	0.4	25 Oct 21 (Awaiting Guidance)	No	Discharge from a group of manmade chemicals used for a variety of residential, commercial, and industrial purposes
11Cl-Pf3OUdS	2	2	0.4	25 Oct 21 (Awaiting Guidance)	No	Discharge from a group of manmade chemicals used for a variety of residential, commercial, and industrial purposes

Unit Descriptions	
Term	**Definition**
ng/L	ng/L: Number of nanograms of substance in one liter of water
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)
ppt	ppt: parts per trillion, or nanograms per liter (ng/L)
pCi/L	pCi/L: picocuries per liter (a measure of radioactivity)
positive samples/month	positive samples/month: Number of samples taken monthly that were found to be positive
NA	NA: not applicable
NR	NR: Monitoring not required but recommended.

Important Drinking Water Definitions	
Term	**Definition**
MCLG	**Maximum Contaminant Level Goal:** 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.
MCL	**Maximum Contaminant Level:** 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.
ACL	**Alternative Concentration Limit:** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

For more information please contact:

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