

# Consumer Confidence Report for Calendar Year 2022

## Luke AFB, AZ



<b>Public Water System ID Number</b>	<b>Public Water System Name</b>	
AZ04-07305	Luke Air Force Base	
<b>Contact Name and Title</b>	<b>Phone Number</b>	<b>Workplace</b>
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**We are pleased to present the 2022 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.**

### **ENSURING YOUR WATER IS SAFE:**

In order to ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations which limit the amounts of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

### **HOW CAN I GET INVOLVED?**

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways; some examples are:

Eliminate excess use of lawn and garden fertilizers and pesticides - they contain hazardous chemicals that can reach your drinking water source.

Dispose of chemicals properly.

Organize a storm drain stenciling project with your local government or water supplier.

## Drinking Water Sources

Your drinking water source is supplied through base groundwater wells from the West Salt River Valley sub-basin within the Phoenix Active Management Area. The water goes through arsenic filtration and then is treated with chlorine to disinfect the water and prevent bacteriological growth. Additionally, Luke AFB receives water from three off-base water providers: Valley Utilities, Liberty Utilities, and EPCOR Utilities-Agua Fria. The off-base water providers also supply groundwater from the West Salt River Valley sub-basin, and EPCOR Utilities also provides surface water from Lake Pleasant.

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 that may come from sewage treatment plants, septic systems, agricultural livestock operations, and 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 farming.

**Pesticides and herbicides** that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

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

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

**Disinfection Byproducts:** potable water systems add disinfectants, like chlorine, to drinking water to kill or inactivate harmful organisms in a process called ‘disinfection’ to ensure high quality water for drinking purposes. When disinfectants are used in the treatment of drinking water, disinfectants react with naturally occurring organic matter present in water, resulting in the formation of Disinfection Byproducts such as: trihalomethanes (TTHMs) and halo-acetic acids (HAAs).

**Nitrate** in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

## Consecutive Connection Sources

A public water system that receives some or all of its finished water from one or more wholesale systems by means of a direct connection or through the distribution system of one or more consecutive systems. Systems that purchase water from another system report regulated contaminants detected from the source water supply in their own CCR.

The following systems provide us a consecutive connection source of water, and their CCR’s can be found here:

**EPCOR Water system** – <https://www.epcor.com/products-services/water/water-quality/water-quality-reports-usa/Pages/water-quality-reports-agua-fria.aspx>

**Liberty Utilities** – <https://arizona.libertyutilities.com/avondale/residential/safety/water/water-safety.html>

**Valley Utilities** – <https://vuwco.com/water-quality>

## Vulnerable Population

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. 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.

For more information about contaminants and potential health effects, or to receive a copy of the U.S. Environmental Protection Agency (EPA) and the U.S. Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and microbiological contaminants visit the EPA *Safe Drinking Water website* at [www.epa.gov/sdwa](http://www.epa.gov/sdwa).

## Definitions/ Abbreviations

**Level Found:** is highest level detected of all test results for a particular contaminant

**Detection Range:** Shows the lowest and highest levels found during a testing period, if only one sample was taken, then this number equals the Level Found

**Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment, or other requirements

**Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water

**Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health

**RAA:** Running Annual Average, or the average of sample analytical results for samples taken during the previous four calendar quarters. Sample results from CY2021 are included in the RAA value until all 4 quarters in 2022 are collected.

### **HAL: Health Advisory Level:**

Provides information on contaminants that can cause human health effects and are known or anticipated to occur in drinking water. EPA's health advisories are non-enforceable and non-regulatory.

**90th percentile:** For lead and copper testing. 10% of test results are above this level and 90% are below this level

**Not Applicable (NA):** Sampling was not completed by regulation or was not required

**Not Detected (ND or <):** Not detectable at reporting limit

**ppm:** Parts per million or Milligrams per liter (mg/L)

**ppb:** Parts per billion or Micrograms per liter (µg/L)

**pCi/L:** Picocurie per liter

<sup>1</sup> **HAA5 (Haloacetic Acids )/TTHM (Total Trihalomethanes)** the running annual average (RAA) is a calculation that consists of the current quarter and prior 3 quarters. For 2022, the highest RAA calculated for Luke was in the 1st quarter. The RAA value shown is higher than the 'High' in Range of All Samples because the average included results from the last three quarters in 2021.

<sup>2</sup> **Arsenic** is a mineral known to cause cancer in humans at high concentration and is linked to other health effects, such as skin damage and circulatory problems. If arsenic is less than or equal to the MCL, your drinking water meets EPA's standards. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water and continues to research the health effects of low levels of arsenic.

<sup>3</sup> **Nitrate** in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause "blue baby syndrome." Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, and detected nitrate levels are above 5 ppm, you should ask advice from your health care provider.

## Lead Informational Statement:

Lead, in drinking water, is primarily from materials and components associated with service lines and home plumbing. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Luke AFB 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 water for drinking or cooking. 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 [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Water Quality Data – Regulated Contaminants

Microbiological (RTCR)	TT Violation Y or N	Number of Positive Samples	Positive Sample(s) Month & Year	MCL	MCLG	Likely Source of Contamination	
Total Coliform	N	0	N/A	0	0	Human and animal fecal waste	
Fecal Indicator (coliphage, enterococci and/or E. coli)	N	0	N/A	0	0	Human and animal fecal waste	
Disinfectants	MCL Violation Y or N	Running Annual Average (RAA)	Detection Range	MRDL	MRDLG	Sample Year	Likely Source of Contamination
Chlorine (mg/L)	N	0.60	0.46-0.72	4	4	2022	Water additive used to control microbes

**Water Quality Data – Regulated Contaminants Continued**

<b>Disinfection By-Products</b>	<b>MCL Violation Y or N</b>	<b>Highest Running Annual Average (RAA)</b>	<b>Range of All Samples-Low-High</b>	<b>MCL</b>	<b>MCLG</b>	<b>Sample Year</b>	<b>Likely Source of Contamination</b>
Haloacetic Acids (HAA5) (ppb) <sup>1</sup>	N	7.9	ND - 2.1	60	N/A	2022	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb) <sup>1</sup>	N	52.4	4.2 – 11.8	80	N/A	2022	Byproduct of drinking water disinfection
<b>Lead &amp; Copper</b>	<b>MCL Violation Y or N</b>	<b>90th Percentile</b>	<b>Number of Samples Exceeds AL</b>	<b>AL</b>	<b>ALG</b>	<b>Sample Year</b>	<b>Likely Source of Contamination</b>
Copper (ppm)	N	0.055	0	1.3	1.3	2022	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	N	ND	0	15	0	2022	Corrosion of household plumbing systems; erosion of natural deposits
<b>Radionuclides</b>	<b>MCL Violation Y or N</b>	<b>Level Found</b>	<b>Detection Range</b>	<b>MCL</b>	<b>MCLG</b>	<b>Sample Year</b>	<b>Likely Source of Contamination</b>
Gross Alpha Activity (pCi/L)	N	2.2	N/A	15	0	2022	Erosion of natural deposits
<b>Inorganic Chemicals (IOC)</b>	<b>MCL Violation Y or N</b>	<b>Level Found</b>	<b>Detection Range</b>	<b>MCL</b>	<b>MCLG</b>	<b>Sample Year</b>	<b>Likely Source of Contamination</b>
Arsenic <sup>2</sup> (ppb)	N	ND	ND	10	0	2022	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
Barium (ppm)	N	0.039	N/A	2	2	2022	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
Chromium (ppb)	N	0.026	N/A	100	100	2022	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (mg/L)	N	2.0	N/A	4.0	4.0	2022	Erosion of natural deposits, water additive which promotes strong teeth
Nitrate <sup>3</sup> (ppm)	N	5.20	N/A	10	10	2022	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppb)	N	0.0020	N/A	50	50	2022	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium (mg/L)	N	110	N/A	3000	N/A	2022	Erosion of natural deposits