



## USAG HUMPHREYS WATER QUALITY REPORT FOR WATER PROVIDED THROUGHOUT 2022 CAMP HUMPHREYS

A water quality report shares a snapshot of the overall drinking water quality provided to our community during the previous year. Included are details about where our water comes from, what it contains, and how it compares against established drinking water standards. Our constant goal is to operate and monitor our treatment systems in a way that provide you with a safe and dependable supply of drinking water. We are committed to ensuring the quality of our water.

**So how is our water quality?** We are proud that our drinking water meets or exceeds all the established water quality standards applicable to USAG Humphreys. As you will see in this summary and its supporting tables, our system again had no violations throughout the 2022 reporting period.

**What are our drinking water sources?** Camp Humphreys has two drinking water sources. The primary drinking water source is water purchased from Pyeongtaek City and it provides ~70% of our current drinking water demand. Pyeongtaek City water comes from the Han River and is treated by the Suji Water Treatment Plant. The other drinking water source is groundwater from on-post deep wells, which provides ~30% of our current drinking water demand.

**Did you know?** As water travels over land or through the ground it dissolves naturally occurring minerals and 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, 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- may come from a variety of sources such as agriculture, stormwater runoff, and residences.
- Organic chemical contaminants- including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, can also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants- can be naturally occurring or be the result of oil and gas production and mining activities.

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 MEDDAC-Korea Area III, Sanitarian at 737-2662.

**This report contains important information about your drinking water.  
Have someone translate it for you or speak with someone who understands it.**  
이 보고서에는 귀하의 식수에 대한 중요한 내용이 실려있습니다. 그러므로 이 보고서를 이해할 수 있는 사람한테 번역해 달라고 부탁드립니다.

**How is our drinking water treated?** There are two drinking water treatment plants on Camp Humphreys. One plant boosts chlorination to better manage residual disinfectant in the already treated city water. The other plant treats our groundwater where processes like aeration, filtration, and chlorination are used as treatment methods. After treatment, both purchased city water and groundwater are tested independently to ensure that our drinking water quality standards are met.

**How is water quality monitored?** USFK Regulation 201-1 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. Water quality testing is conducted based on the contaminant group and specified frequency as shown in Table 1.

**Table 1. Contaminant Group and Monitoring Frequencies**

Contaminant Group	# of Contaminants	Examples	Monitoring Frequency
Physicochemical contaminants	3	Turbidity, pH, chlorine	Every 4 hours
Biological contaminants	2	Total coliform, e-coli	Weekly
Inorganic metals	14	Primary metals, nitrates	Annually
Asbestos	1	Asbestos	Every 9 years
Volatile organic compounds (VOCs)	21	Benzene, TCE, PCE	Quarterly
Synthetic organic compounds (SOCs)	34	Pesticides, PCB	Every 3 years
Sum of five haloacetic acids (HAA5)	5	Monochloroacetic acid, dichloroacetic acid	Quarterly
Total trihalomethanes (TTHMs)	4	Bromoform, chloroform	Quarterly
Bromate	1	Bromate	Monthly
Lead and copper	2	Lead, copper	Semi-annually
Radionuclide compounds	4	Gross alpha, Radium 226, Radium 228, Uranium	Every 4 years



[https://www.cdc.gov/healthywater/drinking/images/water-in-cup.jpg?\\_=01143](https://www.cdc.gov/healthywater/drinking/images/water-in-cup.jpg?_=01143)

**Monitoring results.** Listed in the Tables 2 - 4 below are 13 parameters detected in either treated purchased city water, groundwater, or both during the reporting period. All are below maximum contaminant levels allowed. Not listed are the many others we test for but were not detected. Remember, the presence of contaminants does not necessarily indicate that the water poses a health risk.

**Table 2. Groundwater Treatment Plant**

Contaminants	MCL	Highest Level Detected	Range of Detection (if multiple samples)	Year Sampled	Violation	Typical Sources
<b>Inorganic Chemicals</b>						
Barium (ppm)	2.0	0.13	No Range	2022	<b>NO</b>	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Cyanide (ppb)	200	5.6	No Range	2022	<b>NO</b>	Discharge from steel and pulp mills; erosion of natural deposits
Nitrate (ppm)	10	2.22	1.03 – 2.22	2022	<b>NO</b>	Runoff from fertilizer use; leaching from sewage; erosion of natural deposits
<b>Synthetic Organic Chemicals</b>						
Trichloroethylene (ppb)	5	1.4	ND – 1.4	2022	<b>NO</b>	Discharge from metal degreasing sites and other factories
Toluene (ppb)	1000	1.4	ND – 1.4	2022	<b>NO</b>	Discharge from petroleum factories
<b>Radionuclides</b>						
Uranium (ppb)	30	2.5	No Range	2021	<b>NO</b>	Erosion of natural deposits

**Table 3. City Water Treatment Plant**

Contaminants	MCL	Highest Level Detected	Range of Detection (if multiple samples)	Year Sampled	Violation	Typical Sources
<b>Inorganic Chemicals</b>						
Barium (ppm)	2.0	0.02	No Range	2022	<b>NO</b>	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium (ppb)	100	0.99	No Range	2022	<b>NO</b>	Discharge from steel and pulp mills; Erosion of natural deposits
Cyanide (ppb)	200	6	No Range	2022	<b>NO</b>	Discharge from steel and pulp mills; erosion of natural deposits
Nitrate (ppm)	10	2.19	1.76 - 2.19	2022	<b>NO</b>	Runoff from fertilizer use; leaching from sewage; erosion of natural deposits
<b>Synthetic Organic Chemicals</b>						
Ethylbenzene (ppb)	700	0.9	ND – 0.9	2022	<b>NO</b>	Discharge from petroleum refineries
Toluene (ppb)	1000	2.4	ND – 2.4	2022	<b>NO</b>	Discharge from petroleum factories
<b>Radionuclides</b>						
Uranium (ppb)	30	2.5	No Range	2021 <sup>5</sup>	<b>NO</b>	Erosion of natural deposits

**Table 4. Distribution System Lead, Copper, and Disinfection Byproducts**

Contaminants	MCL or AL	Average Level Detected	Range of Detection (if multiple samples)	Year Sampled	Violation	Typical Sources
TTHMs <sup>3</sup> (ppb)	80	34.4	ND – 77.5	2022	NO	By-product of drinking water disinfection
HAA5 (ppb)	60	13	ND – 35.3	2022	NO	By-product of drinking water disinfection
Bromate <sup>4</sup> (ppb)	10	1.71	ND – 2.4	2022	NO	By-product of drinking water disinfection
Copper (ppm)	AL = 1.0	0.44 <sup>1</sup>	0 <sup>2</sup>	2022	NO	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	AL = 15	1.1 <sup>1</sup>	0 <sup>2</sup>	2022	NO	Corrosion of household plumbing systems; Erosion of natural deposits

**Tables definitions, abbreviations, and notes**

**AL** Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow

**HAA5** Haloacetic acids (five): sum of the concentrations of monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid

**IAW** In accordance with

**NA** Not applicable

**MCL** Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close as feasible using the best available treatment technology.

**ND** Not detected at testing limits.

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

**pCi/L** Picocuries per liter (a measure of radioactivity in water)

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

**TTHM** Trihalomethanes

Table Notes:

- 1) This number represents the 90th percentile value of the samples collected
- 2) The number of samples above the action level
- 3) Some people who drink water containing TTHMs 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.
- 4) Systems using ozone for disinfection or oxidation are required to take at least one sample per month from the entrance to the distribution system for each treatment plant in the system using ozone under normal operating conditions. (City Water Treatment Plant Only)
- 5) IAW USFK Regulation 201-1, radionuclide compounds monitoring frequency is every 4 years

**Some important health information:** 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 MEDDAC-Korea Program Manager at 737-2662.

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. USAG Humphreys 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. 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 [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

**Why is my water cloudy / discolored?** During its journey to your taps, there are several ways in which the appearance of your water may be affected, and occasionally it can become discolored. The most common cause of discoloration is a change in the flow or pressure within the pipes – for example as a result of flushing of a main in your area. The change in pressure can dislodge tiny deposits, which may add a brown color to the water for a short period. Another situation is if the water has sat for a long time in the lines, for example if a housing unit has not been occupied for a long while. Your water may also appear cloudy, or white, on occasion. If you fill a glass of water and it clears from the bottom upwards, then this means your water is just a little more aerated than usual. The bubbles will disappear if the water is left to stand. In most cases, discolored water is not harmful and can be cleared by running cold kitchen tap at a steady flow until it clears. If the water does not clear after 20 minutes, please contact us for advice.

**Where can you get more information?** If you have any questions or would like additional information on your drinking water, please contact one of the people below:

Environmental Division (for compliance related questions)

Mr. Pak, Chung Mok DSN: 756-1059

Email: [chungmok.pak.ln@army.mil](mailto:chungmok.pak.ln@army.mil)

MEDDAC-Korea (for health-related questions)

Mr. Gerace, Ronald L. DSN: 737-2662

Email: [ronald.l.gerace.civ@health.mil](mailto:ronald.l.gerace.civ@health.mil)

If you would like to share your thoughts and/or concerns about our water quality, please know that the Directorate of Public Works does not regularly hold public meetings about the water system. If you have any questions or concerns regarding the Camp Humphreys water system or water quality, please do not hesitate in contacting our Drinking Water Program Manager at (315) 756-1059.

## Steps we can all can take to conserve our drinking water:



Do not run the tap unnecessarily.  
Consider reusing water where possible.

Washing vegetables and fruit  
Brushing your teeth



Use the washer and dishwasher only when necessary.

Older dishwashers can use up to 56 litres per load  
Front-load washers use up to 60 litres per wash



Flush toilets only when necessary.

Toilets that are not low-flow, can use up to 26 litres of water per flush



Minimize shower time and bath levels.

Reducing showers to less than 5 minutes can save up to 4,500 litres per month

<https://www.lethbridge.ca/living-here/water-wastewater/Pages/Emergency-Water-Conservation.aspx>