



Drinking Water Quality Annual Report for Calendar Year 2025



Kunsan Air Base (Published: 1 July 2026)

This annual report summarizes the quality of water delivered by Kunsan Air Base (AB). Under the "Consumer Confidence Reporting Rule" of the federal Safe Drinking Water Act (SDWA) and Overseas Environmental Baseline Guidance Document, community water systems are required to report this water quality information to the public. Presented in this report is information on the source of our water, its constituents, and the health risks associated with any contaminants. The goal of any water system is to provide the public with a safe and dependable supply of drinking water.

“This report contains important information regarding your drinking water. Therefore, please have someone who can understand this report translate it for you. Please call Bioenvironmental Engineering (BE) at DSN: 315-782-6541 if you have any question regarding this report.”

“이 보고서에는 귀하의 식수에 대한 중요한 내용이 실려있습니다. 그러므로 이 보고서를 이해할 수 있는 사람한테 번역해 달라고 부탁드립니다. 보고서에 대한 질문은 생물환경공학과 315-782-6541 로 문의 하시기 바랍니다.”

1. Drinking Water Sources for Kunsan Air Base

During calendar year 2025, Kunsan AB used a direct connection with the regional water purveyor (Gunsan City), K-Water, this water treatment facility receives its source water from the Gwangjuho Reservoir on the Geum River and is located approximately 65 km from Kunsan AB. The water treatment plant uses a conventional filtration system including flocculation, settling, filtration, and chlorination. Please contact the BE Flight (8 OMRS/SGXB) at DSN 315-782-6541 for more information on these water sources.

2. Common Sources of Drinking Water Contamination

Common sources of drinking water (both tap 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 animal or human activity. Contaminants that may be present in source or untreated 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 storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- **Pesticides and herbicides**, which may come from agriculture, urban storm water runoff and residential uses.
- **Organic chemical contaminants**, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and can come from gas stations, urban storm water runoff and septic systems.
- **Radioactive Contaminants**, which can be naturally occurring or the result of oil/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 Environmental Protection

Agency's (EPA) Safe Drinking Water Hotline (1-800-426-4791). The EPA prescribes regulations that limit the amounts of certain contaminants in water provided by public water systems in order to ensure that tap water is safe to drink. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

3. Water Safety and Quality Assurance Responsibilities

The Water and Fuels System Maintenance (WFSM) Flight manages the maintenance and operation of the primary drinking water supply and distribution system. These personnel operate on 24-hour work shifts to ensure the system is pressurized and disinfectant levels are always adequate. The BE Flight monitors the drinking water quality provided to consumers on base and addresses any health-related concerns. Analysis is conducted by certified laboratories for all contaminants. Additionally, BE personnel analyze water samples for microbial contaminants on a monthly basis.

Department of Air Force Instruction 48-144 requires the Drinking Water Working Group (DWWG) to meet semi-annually and include representation from the WFSM Flight (8 CES/CEOIU), Civil Engineering Environmental Element, and BE. The DWWG meets to address all local drinking water issues involving compliance, risk reduction, and continuous improvement. The DWWG has the authority to call a special meeting with Public Affairs (PA), Base Legal (JA), or other related members as needed. Consumers are welcome to attend this meeting; please call 315-782-6541 for more information.

4. Drinking Water Monitoring

Kunsan AB BE Flight routinely monitors for over 80 contaminants using certified laboratories and approved methods in accordance with the 2025 United States Forces Korea Manual 4715.05, also known as the Korean Environmental Governing Standards (KEGS) and EPA regulations. Only contaminants that were detected are required to be included in the reporting tables. A breakdown of the categories of contaminants we monitor is as follows:

- **Microbial contaminants:** Sampling is conducted monthly at distribution points such as the Fire Department, dining facility, BX and various other administrative and industrial work centers on base to include analysis for the levels of disinfectants in the water. During 2025, a total of 60 microbiological samples were taken with NO samples testing positive for microbial contaminants.
- **Inorganic compounds:** Most recent sampling date: Dec 2025. This list can be found in KEGS Enclosure G, Page G-9, Table G-3
- **Volatile organic compounds:** Most recent sampling date: Dec 2025. This list can be found in KEGS Enclosure G, Page G-14, Table G-5.
- **Synthetic volatile organic compounds:** Most recent sampling date: Dec 2025. This list can be found in KEGS Enclosure G, Page G-13-G14, Table G-5. This includes pesticides and insecticides which are administered by Installation Pest Management.
- **Disinfection By-Products:** Most recent sampling date: Dec 2025. These contaminants form in water from the reaction of chlorine with chemicals in the water. See Enclosure G of the KEGS, page G-18, Table G-7.
- **Lead and Copper:** Most recent sampling date: Aug 2025. Lead and copper are present in older sections of the water distribution system. See Enclosure G, Page G-12, Table G-4 of the KEGS.
- **Radiological Compounds:** Most recent sampling date: Dec 2025. See Enclosure G, Page G-23, Table G-8 of the KEGS.
- **PFAS:** Most recent sampling date: May 2025. Monitoring requirements are based on OCONUS DoD Policy.

Table 1. Contaminant Groups and Monitoring Frequencies as of 2025

Contaminant	Chemical Names	Monitoring Frequency	Sampling Location
Microbial	Total coliform, Fecal coliform, pH, Free Available Chlorine	Monthly	Fire Dept. Bldg. 2815 Food Court Bldg. 1113 DFAC Bldg. 550 PGM Bldg. 2748 Entry point Bldg.980
Inorganic Compounds	Metals: antimony, arsenic, barium, beryllium, cadmium, chromium, mercury, nickel, selenium, sodium, thallium, cyanide	Annually	Entry Point Bldg. 980
	Nitrate, Nitrite	Annually	
	Asbestos	Once every 9 years Last completed 2024	
Volatile Organic Compounds	1,1,1-trichloroethane, chlorobenzene, cis-1,2-dichloroethene, 1,1,2-trichloroethane, 1,1-dichloroethene, benzene, 1,2,4-trichlorobenzene, ethylbenzene, p-xylene, 1,2-dichlorobenzene, styrene, tetrachloroethene, 1,2-dichloroethane, trans-1, 2-dichloroethene, trichloroethylene, 1,2-dichloropropane 1,4-dichlorobenzene, trichloroethene (TCE) vinyl chloride, carbon tetrachloride, toluene	Annually	Entry Point Bldg. 980
Synthetic Organic Compounds	Alachlor, Atrazine, Benzo [a] pyrene, Carbofuran, Chlordane, Dalapon, 2,4-D, 1,2-Dibromo-3-chloropropane (DBCP), Di (2-ethylhexyl) adipate, Dinoseb, Diquat, Endrin, Endothall, Ethylene Dibromide (EDB), Glyphosate, Heptachlor, Heptachlorepoxyde, Hexachlorobenzene, hexachlorocyclopentadiene, Lindane, Methoxychlor, Oxamyl (Vydate), PCBs (as decachlorobiphenyls), Pentachlorophenol, Picloram, Simazine, 2,3,7,8-TCDD (Dioxin), Toxaphene, 2,4,5-TP (Silvex)	Once every 3 years Last completed 2025	Entry Point Bldg. 980
Disinfection By-Products	Total Trihalomethanes (TTHM) Total Haloacetic acids (HAA5)	Quarterly	Entry Point Bldg. 980 CATM Bldg. 350
Lead & Copper	Lead, Copper	Semi-annually	40 locations across Kunsan AB
Radiological Compounds	Gross Alpha, Radium 226, Radium 228, Uranium	4 consecutive quarters, every 4 years	Entry Point Bldg. 980
	Gross Beta, Tritium, Strontium	4 consecutive quarters, Once every 9 years	
PFAS Compounds	Per- and polyfluoroalkyl substances (PFAS)	1 sample in August 2025, quarterly starting in 2026	Entry Point Bldg. 980

5. Special Precautions

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 Safe Drinking Water Hotline (1-800-426-4791).

6. Monitoring Results in Calendar Year 2025

This section details the contaminants identified during the 2025 reporting period. Contaminants specified in Table 1 that remained below detection thresholds have been omitted from these tables.

Table 2. 2025 Lead and Copper Results

Substance	Date Sampled	Violation? Yes / No	Unit	Your Water (90 th Percentile)	Action Level (AL)	# of Sites Above AL ¹
Lead	Mar 2025	No	mg/L	0.00318	0.015	3 of 40
Lead	Aug 2025	No	mg/L	0.00673	0.015	2 of 40
Copper	Mar 2025	No	mg/L	0.63	1.3	1 of 40
Copper	Aug 2025	Yes	mg/L	1.31	1.3	5 of 40

Copper Notice:

During the semi-annual water sampling events conducted in March and August 2025, BE collected water samples across Kunsan AB to test for lead and copper levels in the drinking water. During these periods, the KEGS Action Level (AL) for copper was exceeded. An AL exceedance is not a violation but can trigger other requirements that include water quality parameter (WQP) monitoring, corrosion control treatment, public education, and service line replacement.

Should I be concerned?

Both EPA and United States Forces Korea (USFK) environmental regulations set conservative action levels (ALs). The AL is a measure of the effectiveness of the corrosion control treatment in water systems – it is not a standard for establishing safe levels of lead and copper in a home. The AL for copper is exceeded if the concentration of copper in more than 10 percent of tap water samples collected during a monitoring period is greater than the 1.3 mg/L (KEGS drinking water requirement). If sampling results for copper or lead exceed the AL, the operator of that public water system (PWS) must take action to make the water in its drinking water distribution system less corrosive. Additionally, the EPA has established a maximum contaminant level (MCL) of 1.3 mg/L for copper and 0.015 mg/L for lead. An MCL is important to know that MCLs are non-enforceable public health goals and allow for a margin of safety. Consumption of water with copper levels higher than the MCL does not mean that you will experience health effects. Health effects information is included in the following paragraphs.

What should I do?

We recommend residents run their faucet for at least 60 seconds before consuming water. This action will flush out most copper and lead particles – empirical evidence shows that copper and lead decrease to negligible levels in the line by just letting your tap run for 30-60 seconds. NOTE: The risk of copper and lead ingestion exposure from showering, washing hands, cleaning dishes, brushing teeth, and washing face is minimal. Continue to flush your lines prior to consuming water for drinking or cooking purposes

Table 3. 2025 Disinfection By-Product Results

Substance	Date Sampled	Violation? Yes / No	Unit	Detected Level		You Water	MCL
				Highest	Lowest		
Total Trihalomethanes (TTHM)	4 quarters in 2025	No	mg/L	0.060	0.035	0.050	0.080
Haloacetic Acids (HAA5)	4 quarters in 2025	No	mg/L	0.062	0.031	0.047	0.060

Table 4. Inorganics Compounds

Substance	Date Sampled	Violation? Yes / No	Results	Unit	MCL
Barium	Aug 2025	No	0.012	mg/L	2.0
Nitrate	Aug 2025	No	1.38	mg/L	10

Table 5. Radiological Compounds

Substance	Date Sampled	Violation? Yes / No	Average Results	Unit	MCL
Gross Alpha	3rd & 4th quarter of 2025	No	0.0453	pCi/L	15
Combined Radium-226 and -228	3rd & 4th quarter of 2025	No	0.228	pCi/L	5
Gross Beta	3rd & 4th quarter of 2025	No	0.93	pCi/L	50

Table 6. Per- and Polyfluoroalkyl Substances (PFAS)

Analyte	Source Water	Location	Results (ppt)	MCL	Last Sampled
Perfluorooctanoic acid (PFOA)	K-Water	Bldg 980	Non-detect	4.0 ppt	Aug 2025
Perfluorooctanesulfonic acid (PFOS)			Non-detect	4.0 ppt	
Perfluorohexane sulfonate (PFHxS)			Non-detect	10 ppt	
Perfluorononanoic acid (PFNA)			Non-detect	10 ppt	
Hexafluoropropylene Oxide-Dimer Acid (HFPO-DA) (GenX)			Non-detect	10 ppt	
Mixture of two or more: PFHxS, PFNA, HFPO-DA, and PFBS ¹			Non-detect	Hazard Index (HI) of 1 (unitless)	

¹ The sampling point is above the HI MCL if the HI exceeds the MCL and if two or more Hazard Index analytes had an observed sample analytical result at or above the MCL in any of the quarterly samples.

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?

Yes. On Sep 28, 2025, the Environmental Protection Agency (EPA) published a final National Primary Drinking Water Regulation for certain per- and polyfluoroalkyl substances (PFAS) under the Safe Drinking Water Act (SDWA). While the regulation requires initial sampling for PFAS no later than Apr 26, 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 Apr 26, 2029.

Table 7. PFAS

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 ²	HI of 1 (unitless)

For systems where DoD provides drinking water, the Department is collecting the necessary sampling information and is taking actions to ensure compliance within the required 5-year timeframe.

Has Kunsan AB tested its water for PFAS?

Yes. In 2025, samples were collected throughout the year and the highest readings are displayed in Table 6 above.

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 pending DoD OCONUS drinking water policy to ensure continued compliance.

Table 8. 2025 Kunsan AB Monitoring Violations

Monitoring Violation	Explanation	Health Effects	Steps Taken to Correct the Violation
Copper exceeding Action Level.	In August 2025, the Bioenvironmental Engineering (BE) flight conducted required semi-annual lead and copper water monitoring. The results, received on 21 August 2025, indicated that the action level for copper was exceeded. According to regulations, an action level for copper is exceeded if more than 10% of the samples from a monitoring period have a copper concentration	While copper is an essential nutrient, short-term exposure to high levels can cause gastrointestinal distress, including nausea, vomiting, and stomach cramps. However, long-term exposure can potentially lead to liver or kidney damage. It is important to address the action level exceedance to prevent these health risks.	Civil Engineering was formally notified of the exceedance via email on 7 October 2025. The entire base populace was informed via a Public Affairs email on 13 October 2025. Furthermore, BE incorporated these results and safety recommendations into the members dorm in processing checklist for all newly arrived USAF members. BE has advised all water consumers at Kunsan AB

	greater than 1.3 mg/L. During this event at Kunsan AB, 5 out of 40 housing units sampled were above this action level. This exceedance is not a direct violation itself, but a trigger that mandates specific follow-up actions to ensure the safety of the water supply.		to flush their cold water tap for 30 seconds before using the water for drinking or cooking. This action helps clear out any inorganic materials, like copper, that may have settled in the pipes during periods of non-use. All records from this sampling event are maintained by BE, and the next round of lead and copper sampling was completed in February 2026 to monitor the effectiveness of corrective measures and ensure water quality.
Disinfection By-Product monitoring frequency.	Monitoring frequency is required based on the consumer population. One location was sampled quarterly and the KEGS requirement IAW Table G-7, DDBP Monitoring Requirements mandates two sampling locations.	While disinfection is vital for killing harmful germs, it creates byproducts that may increase cancer risk or cause organ and nervous system issues if consumed above MCL over many years.	BE has established a sampling schedule to ensure sampling requirements are completed as specified in KEGs.

Terms Defined

Action Level (AL) - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow. An AL exceedance is not a violation but can trigger other requirements that include water quality parameter (WQP) monitoring, corrosion control treatment, public education, and service line replacement.

DoW - Department of Defense.

EPA - United States Environmental Protection Agency.

HAA5 - Haloacetic Acids (bromochloroacetic acid, dichloroacetic acid, monobromoacetic acid, monochloroacetic acid, and trichloroacetic acid)

KEGS - Korean Environmental Governing Standards.

Maximum Contaminant Level (MCL) - 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.

Part per million (ppm) – 1/1,000,000; One ppm corresponds to 1 minute in 2 years, or a single penny in \$10,000.

Part per billion (ppb) – 1/1,000,000,000; One ppb corresponds to 1 minute in 2,000 years, or a single penny in \$10,000,000.

Part per trillion (ppt) – 1/1,000,000,000,000; One ppt corresponds to 1 minute in 2,000,000 years, or a single penny in \$10,000,000,000.

SWDA – The U.S. Safe Drinking Water Act is a law passed by Congress in 1974 to protect public health by regulation public drinking water supplies. This law contains multiple provisions and details are available at <https://www.epa.gov/sdwa>.

TTHM - Total Trihalomethanes

For More Information

Organization

8 OMRS Bioenvironmental Engineering
8 CES Water & Fuel Systems Maintenance

DSN

315-782-6541
315-782-5519

Service Area

Drinking water quality concerns
Water treatment and distribution

E-mail: usaf.kunsan.8-mdg.mbx.8-omrs-sgxb@health.mil

DAEGU AB DRINKING WATER SYSTEM CONSUMER CONFIDENCE REPORT (CCR) 2026 (Covering Calendar Year 2025)

이 보고서에는 귀하의 식수에 대한 중요한 내용이 실려있습니다. 그러므로 이 보고서를 이해할 수 있는 사람한테 번역해달라고 부탁하시기 바랍니다. 보고서에 대한 질문은 오산 생물환경공학과 784-2623로 문의하시기 바랍니다.

This consumer confidence report provides the 2025 drinking water quality information for Daegu Air Base (AB). This report is based on the data collected, assessed and documented by the Bioenvironmental Engineering Flight of the 51st Operational Medical Readiness Squadron (OMRS). It also includes information on how the 8th Materiel Maintenance Squadron's contractor, Global Systemized Industry (DSN: 766-4651), operates and maintains the drinking water system. Please review this report for your information. If you have any questions, please call the Bioenvironmental Engineering Flight from the 8th OMRS at DSN: 782-6541.

Sampling to Ensure Your Water Quality

Bioenvironmental Engineering and your local independent duty medical technicians (IDMTs) perform water testing to ensure your drinking water is the same quality that you would expect to have in the US. Your tap water has met all US Environmental Protection Agency (EPA) and Korean Environmental Governing Standards (KEGS) for drinking water during the calendar year (CY) 2025.

Drinking Water Contaminants and Your Health

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 collects contaminants such as naturally occurring minerals, naturally occurring radioactive material, or substances from human or animal activities. The contaminants that may be present in any water source 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 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, storm water 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 storm water runoff, and septic systems.
- Radioactive contaminants - can be naturally occurring or be the result of oil and gas production and mining activities.

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

Drinking water, including bottled water, may reasonably be expected to contain small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. You can call the EPA Safe Drinking Water Hotline (1-800-426-4791) for more information about contaminants and potential health effects.

Vulnerable Individuals

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 living with HIV/AIDS or other immune system disorders, some elderly, and infants can be at greater risk of infections. These individuals should seek advice about drinking water from their health care providers. The EPA and the Centers for Disease Control (CDC) provide guidelines to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants. These guidelines are available from the Safe Drinking Water Hotline (1-800-426-4791).

Daegu AB Water Sources

The primary water source for Daegu AB is the Kumho River. The Kumho River is a branch of the Nakdong River. The Kumho River feeds the Unman Dam Reservoir which, in turn, supplies water to the Kosan Water Treatment Plant (WTP). The Kosan WTP provides flocculation, settling, filtration and chlorination water treatments before supplying Daegu AB with water. The Daegu AB Water Treatment Plant adds chlorine to provide additional disinfection. In addition, some facilities also have installed point of use water filtration units at water faucets and ice machines.

Monitored Contaminants

During CY 2025, your local IDMTs and the Osan AB Bioenvironmental Engineering collected 318 samples to monitor for 115 different contaminants. Also, Global Systemized Industry monitored chlorine levels daily and the IDMT monitored chlorine levels weekly. Table 1 lists all of the contaminants monitored in CY 2025 and the required monitoring frequency for each contaminant group.

Table 1. CY 2025 Sample Contaminant Groups and Monitoring Frequencies

Contaminant Group	Number of Contaminants Monitored	Examples	Monitoring Frequency
Biological Contaminants	3	Total coliform, fecal coliform, etc.	Monthly
Inorganic Contaminants	16	Metals, fluoride, etc.	Annually
Nitrates, Nitrites	3	--	Annually
Volatile Organic Compounds (VOCs)	21	Benzene, toluene, trichloroethylene (TCE), etc.	Annually
Synthetic Organic Compounds (SOCs)	33	Pesticides, polychlorinated biphenyls (PCBs), etc.	Annually
Special Case SOCs	3	Dapapon, Di(2-ethylhexyl)phthalate, Dinoseb	Quarterly*
Total Trihalomethanes (TTHMs)	4	Bromoform, chloroform, etc.	Quarterly
Haloacetic acids	4	Monochloroacetic acid,	Quarterly

(HHA5)		dichloroacetic acid, trichloroacetic acid, etc.	
Lead and Copper	2	--	Annually
Per- and polyfluoroalkyl substances (PFAS)	25	PFOA, PFOS, PFHxS, HFPO-DA, PFNA, etc.	Quarterly from 4th Quarter of CY25
Radiological Compounds	4	Gross alpha, uranium, radium 226/228, etc.	Every 4 years; sampled in CY24
Radiological Compounds	3	Gross alpha, uranium, radium 226/228	Every 9 years; sampled in CY24
Asbestos	1	-	Every 9 years; last sampled in CY19

*Note: In 2014, Di(2-ethylhexyl)phthalate was detected above the reporting limit but was below the MCL. Similarly, in 2023, Dalapon and Dinoseb were also detected but remained below the maximum contaminant level (MCL). Per the KEGS, increased monitoring is required until the water system is reliably and consistently below the MCL.

Table 2. CY 2025 Biological Sampling Results

Contaminant	MCLG	MCL	Level Detected	Meet Standard?
Total Coliform	0	0 positive sample/month	0 positive samples	Yes
Fecal Coliform and E coli	0	0 positive sample/month	0 positive samples	Yes

Table 3 lists the lead and copper results for CY 2025. The standard for lead and copper is that no more than 10% of samples collected exceed the action level. Lead and Copper monitoring for Daegu AB met this requirement.

Table 3. CY 2025 Lead and Copper Sampling Results

Contaminant	EPA		KEGS	# of sample sites exceeding action level	90th percentile values	Meet standard?
	MCLG	AL	AL			
Lead in ppb	0	15	15	1 of 11 sites	ND	Yes
Copper in ppb	1300	1300	1300	0 of 11 sites	104	Yes

Table 4 lists all the drinking water contaminants that were detected in CY 2025. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. For total trihalomethanes and haloacetic acids, compliance is based on the running average of all samples collected over a year. Therefore, if a single sample exceeds the MCL, but the average of all the readings for that year is less than the MCL, then the system complies.

Table 4. CY 2025 Detected Water Contaminants

CONTAMINANTS	EPA		KEGS*	Your Water	Meet Standard?
	MCLG	MCL	MCL		
Inorganic Compounds					
Barium in ppm	2	2	2	0.0009	Yes
Nitrate [measured as Nitrogen in ppm]	10	10	10	0.053	Yes

Total Nitrate and Nitrite in ppm	NR	NR	10	1.05	Yes
Fluoride in ppm	4	4	4	1.05	Yes
Sodium in ppm	NR	NR	NR	8.9	Yes
Disinfectant/Disinfection Byproducts					
TTHM	NR	80	80	Annual Average 35.5	Yes
HAA5	NR	60	60	Annual Average 29.7	Yes

Table 5 lists regulated radiological contaminants results for CY 2024 and CY 2025. The results presented in this report are from the most recent testing conducted in accordance with the KEGS: gross alpha, radium 226/228 and uranium are sampled every 4 years and were last tested in 2023. Gross beta activity is sampled every 9 years and was tested in 2025. The presence of regulated radiological contaminant in the water does not necessarily indicate that the water poses a health risk.

Table 5. Monitored Radiological Contaminants

Contaminant	EPA		KEGS* MCL	Your Water	Meet Standard?
	MCLG*	MCL*			
Gross Alpha in pCi/L	0	15	15	ND	Yes
Combined Radium 226 and 228 in pCi/L	0	5	5	ND	Yes
Uranium in ppb	0	30	30	ND	Yes
Gross Beta Activity in pCi/L	0	50	50	ND	Yes

PFAS Contaminant Monitoring

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?

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

Table 6. PFAS

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	HI of 1 (unitless)

For systems where DoW provides drinking water, the Department is collecting the necessary sampling information and is taking actions to ensure compliance within the required 5-year timeframe in accordance with the policy, published on September 28, 2025, for monitoring and treatment of PFAS in DoW drinking water system outside the United States.

Has Daegu AB tested its water for PFAS?

Yes, In November 2025 samples were collected from the point of entry to drinking water system IAW the policy. Drinking water testing results were below the MCL for all 6 PFAS compounds covered by the EPA drinking water rule and provided in Table 7. The water system will be periodically monitored as required by the policy to ensure continued compliance. Table 7 lists the results of PFAS samples collected for CY 2025. The presence of the substance in the water does not necessarily indicate that the water poses a health risk.

Table 7. CY 2025 PFAS Compounds

Contaminant	EPA	KEGS MCL	Your Water	Meet Standard?
	MCL			
Perfluorooctanoic acid (PFOA) in ppt*	4.0	NR	ND	Yes
Perfluorooctanesulfonic acid (PFOS) in ppt*	4.0	NR	ND	Yes
Perfluorohexanesulfonic acid (PFHxS) in ppt*	10	NR	ND	Yes
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX) in ppt*	10	NR	ND	Yes
Perfluorononanoic acid (PFNA) in ppt*	10	NR	ND	Yes
Perfluorobutanesulfonic acid (PFBS) in ppt*	n/a	NR	4.15	Yes
Mixture of two or more: PFHxS, PFNA, HFPO-DA, and PFBS	Hazard Index of 1 (unitless)	NR	0	Yes

Where Can I Get More Information?

Currently, a routine public meeting for drinking water is not held at your installation. However, if you have any specific questions or concerns about your drinking water, please contact the Kunsan AB Bioenvironmental Engineering (BE) office at 782-6541. You can also contact the BE office for any additional information on drinking water or questions regarding this Consumer Confidence Report (CCR).

The Bioenvironmental Engineering Flight prepared this CCR and will post it on the 7th AF homepage

(<http://www.7af.pacaf.af.mil/>).

Information about EPA water regulations can be found at <http://www.epa.gov>.

General information about Korean water sources in English and Korean can be found at:
<http://www.kwater.or.kr>.

DEFINITIONS

Action Level (AL): The level of lead or copper which, if exceeded, triggers treatment or other requirements that a water system must follow.

Calendar Year (CY): The period from January 1 to December 31.

Maximum Contaminant Level (MCL): 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.

Maximum Contaminant Level Goal (MCLG): 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.

Non-detect (ND): The contaminant was not detected in the sample.

Not-Regulated (NR): The EPA and/or KEGS have not determined a regulatory limit for the contaminant in drinking water.

Safe Drinking Water Act (SDWA): The main federal law that ensures the quality of Americans' drinking water. Under SDWA, EPA sets standards for drinking water quality and oversees the states, localities, and water suppliers who implement those standards.

Units

MFL: million fibers per liter (a measure of asbestos in drinking water)

pCi/L: picocuries per liter (a measure of radioactivity)

Parts per billion (ppb): A ppb is a thousandth of a ppm

Parts per million (ppm): Parts per million is the most commonly used term to describe minuscule amounts of contaminants in our environment. It is a measure of concentration that describes the amount of one material in a larger amount of another material. For example, the amount of a chemical in a volume of water. If you divide a liter of water into a million parts, then each part would be equal to "one part per million."

Parts per trillion (ppt): A ppt is a thousandth of a ppb.



Drinking Water Quality Annual Report for Calendar Year 2025



Gwangju Air Base (Published: 1 July 2026)

This annual report summarizes the quality of water delivered by Gwangju Air Base (AB). Under the "Consumer Confidence Reporting Rule" of the federal Safe Drinking Water Act (SDWA) and Overseas Environmental Baseline Guidance Document, community water systems are required to report this water quality information to the public. Presented in this report is information on the source of our water, its constituents, and the health risks associated with any contaminants. The goal of any water system is to provide the public with a safe and dependable supply of drinking water.

"This report contains important information regarding your drinking water. Therefore, please have someone who can understand this report translate it for you. Please call Bioenvironmental Engineering at DSN: 315-782-6541 if you have any question regarding this report."

"이 보고서에는 귀하의 식수에 대한 중요한 내용이 실려있습니다. 그러므로 이 보고서를 이해할 수 있는 사람한테 번역해 달라고 부탁하시기 바랍니다. 보고서에 대한 질문은 생물환경공학과 315-782-6541 로 문의 하시기 바랍니다."

1. Drinking Water Sources for Gwangju Air Base

The primary water source for Gwangju AB is the Hwang Yong River. This river supplies Juam Reservoir, which feeds the Duknam Water Treatment Plant (WTP). The water undergoes flocculation, settling, filtration, granulated activated carbon (GAC) filtration, and chlorination at the Duknam WTP. This water then enters another water treatment plant on Gwangju AB that performs disinfection of the water by chlorine addition prior to distribution to the base. For more information on these water sources, contact the Bioenvironmental Engineering (BE) Flight (8 OMRS/SGXB) at DSN 315-782-6541.

2. Common Sources of Drinking Water Contamination

Common sources of drinking water (both tap 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 animal or human activity. Contaminants that may be present in source or untreated 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 storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- **Pesticides and herbicides**, which may come from agriculture, urban storm water runoff and residential uses.
- **Organic chemical contaminants**, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and can come from gas stations, urban storm water runoff and septic systems.
- **Radioactive Contaminants**, which can be naturally occurring or the result of oil/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 Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (1-800-426-4791). The EPA prescribes regulations that limit the amounts

of certain contaminants in water provided by public water systems to ensure that tap water is safe to drink. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

3. Water Safety and Quality Assurance Responsibilities

Republic of Korea Air Force (ROKAF) and US Forces Korea (USFK) share the management and maintenance of the primary drinking water supply and distribution system at Gwangju AB. Water utility personnel from the 8 Material Maintenance Squadron Civil Engineering Office (8 MMS/CE) ensure the system is pressurized and that disinfectant levels are always adequate. The BE Flight monitors the quality of the drinking water provided to consumers and addresses any health-related concerns. Analysis is conducted by certified laboratories for all contaminants. Additionally, BE personnel analyze water samples for microbial contaminants monthly.

Department of the Air Force Instruction 48-144 requires the Drinking Water Working Group (DWWG) to meet semi-annually and include representation from the Water and Fuels Systems Maintenance Flight, Civil Engineering Environmental Element, and BE. The DWWG meets to address all local drinking water issues involving compliance, risk reduction, and continuous improvement. The DWWG has the authority to call a special meeting with Public Affairs (PA), Base Legal (JA), or other related members as needed. Consumers are welcome to attend this meeting; please call 315-782-6541 for schedule information.

4. Drinking Water Monitoring

Kunsan AB BE Flight routinely monitors for over 80 contaminants using certified laboratories and approved methods in accordance with the 2024 United States Forces Korea Manual 4715.05, also known as the Korean Environmental Governing Standards (KEGS) and EPA regulations. Only contaminants that were detected are required to be included in the reporting tables. A breakdown of the categories of contaminants we monitor is as follows:

- **Microbial contaminants:** Sampling is conducted monthly at distribution points such as the water treatment plant, food court, and various other administrative and industrial work centers on base to include analysis for the levels of chlorine in the water. During 2025, a total of 36 microbiological samples were taken with NO samples testing positive for contaminants.
- **Inorganic compounds:** Most recent sampling date: Nov 2025. This list can be found in KEGS Enclosure G, Page G-9, Table G-3
- **Volatile organic compounds:** Most recent sampling date: Nov 2025. This list can be found in KEGS Enclosure G, Page G-14, Table G-5.
- **Synthetic volatile organic compounds:** Most recent sampling date: Nov 2025. This list can be found in KEGS Enclosure G, Page G-13-G14, Table G-5. This includes pesticides and insecticides which are administered by Installation Pest Management.
- **Disinfection By-Products:** Most recent sampling date: Nov 2025. These contaminants form in water from the reaction of chlorine with chemicals in the water. See Enclosure G of the KEGS, page G-18, Table G-7.
- **Lead and Copper:** Most recent sampling date: Dec 2025. Lead and copper are present in older sections of the water distribution system. See Enclosure G, Page G-12, Table G-4 of the KEGS.
- **Radiological Compounds:** Most recent sampling date: Dec 2025. See Enclosure G, Page G-23, Table G-8 of the KEGS.
- **PFAS:** Most recent sampling date: Nov 2024. Monitoring requirements are based on OCONUS DoD Policy.

Table 1. Contaminant Groups and Monitoring Frequencies as of 2025

Contaminant	Chemical Names	Monitoring Frequency	Sampling Location
Microbial	Total coliform, Fecal coliform, pH, Free Available Chlorine	Monthly	Entry Point Bldg. 238 Clinic Building 2106 Food-court Bldg. 122
Inorganic Compounds	Metals: antimony, arsenic, barium, beryllium, cadmium, chromium, mercury, nickel, selenium, sodium, thallium, cyanide	Annually	Entry Point Bldg. 238
	Nitrate, Nitrite	Annually	
	Asbestos	Once every 9 years Last completed 2024	
Volatile Organic Compounds	1,1,1-trichloroethane, chlorobenzene, cis-1,2-dichloroethene, 1,1,2-trichloroethane, 1,1-dichloroethene, benzene, 1,2,4-trichlorobenzene, ethylbenzene, p-xylene, 1,2-dichlorobenzene, styrene, tetrachloroethene, 1,2-dichloroethane, trans-1, 2-dichloroethene, trichloroethylene, 1,2-dichloropropane 1,4-dichlorobenzene, trichloroethene (TCE) vinyl chloride, carbon tetrachloride, toluene	Annually	Entry Point Bldg. 238
Synthetic Organic Compounds	Alachlor, Atrazine, Benzo [a] pyrene, Carbofuran, Chlordane, Dalapon, 2,4-D, 1,2-Dibromo-3-chloropropane (DBCP), Di (2-ethylhexyl) adipate, Dinoseb, Diquat, Endrin, Endothall, Ethylene Dibromide (EDB), Glyphosate, Heptachlor, Heptachlorepoxyde, Hexachlorobenzene, hexachlorocyclopentadiene, Lindane, Methoxychlor, Oxamyl (Vydate), PCBs (as decachlorobiphenyls), Pentachlorophenol, Picloram, Simazine, 2,3,7,8-TCDD (Dioxin), Toxaphene, 2,4,5-TP (Silvex)	Once every 3 years Last completed 2025	Entry Point Bldg. 238
Disinfection By-Products	Total Trihalomethanes (TTHM) Total Haloacetic acids (HAA5)	Annually	Entry Point Bldg. 238
Lead & Copper	Lead, Copper	Semi-annually	8 locations across Gwangju AB
Radiological Compounds	Gross Alpha, Radium 226, Radium 228, Uranium	4 consecutive quarters, every 4 years	Entry Point Bldg. 238
	Gross Beta, Tritium, Strontium	4 consecutive quarters, Once every 9 years	
PFAS Compounds	Per- and polyfluoroalkyl substances (PFAS)	Last sample in 2024, quarterly starting in 2026	Entry Point Bldg. 238

5. Special Precautions

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 Safe Drinking Water Hotline (1-800-426-4791).

6. Monitoring Results in Calendar Year 2025

This section details the contaminants identified during the 2025 reporting period. Contaminants specified in Table 1 that remained below detection thresholds have been omitted from these tables.

Table 2. 2025 Lead and Copper Results

Substance	Date Sampled	Violation? Yes / No	Unit	Your Water (90 th Percentile)	Action Level (AL)	# of Sites Above AL ¹
Lead	Jun 2025	No	mg/L	0.0046	0.015	0 of 6
Lead	Dec 2025	No	mg/L	0.0061	0.015	0 of 6
Copper	Jun 2025	Yes	mg/L	2.035	1.3	3 of 6
Copper	Dec 2025	Yes	mg/L	2.73	1.3	2 of 6

Copper Notice:

During the semi-annual water sampling events conducted in June and December 2025, BE collected water samples from Gwangju AB to test for lead and copper levels in the drinking water. During these periods, the KEGS Action Level (AL) for copper was exceeded. An AL exceedance is not a violation but can trigger other requirements that include water quality parameter (WQP) monitoring, corrosion control treatment, public education, and service line replacement.

Should I be concerned?

Both EPA and United States Forces Korea (USFK) environmental regulations set conservative action levels (ALs). The AL is a measure of the effectiveness of the corrosion control treatment in water systems – it is not a standard for establishing safe levels of lead and copper in a home. The AL for copper is exceeded if the concentration of copper in more than 10 percent of tap water samples collected during a monitoring period is greater than the 1.3 mg/L (KEGS drinking water requirement). If sampling results for copper or lead exceed the AL, the operator of that public water system (PWS) must take action to make the water in its drinking water distribution system less corrosive. Additionally, the EPA has established a maximum contaminant level (MCL) of 1.3 mg/L for copper and 0.015 mg/L for lead. It is important to know that MCLs are non-enforceable public health goals and allow for a margin of safety. Consumption of water with copper levels higher than the MCL does not mean that you will experience health effects. Health effects information is included in the following paragraphs.

What should I do?

We recommend residents run their faucet for at least 60 seconds before consuming water. This action will flush out most copper and lead particles – empirical evidence shows that copper and lead decrease to negligible levels in the line by just letting your tap run for 30-60 seconds. NOTE: The risk of copper and lead ingestion exposure from showering, washing hands, cleaning dishes, brushing teeth, and washing face is minimal. Continue to flush your lines prior to consuming water for drinking or cooking purposes.

Table 3. 2025 Disinfection By-Product Results

Substance	Date Sampled	Violation? Yes / No	Unit	Detected Level		Annual Average	MCL
				Highest	Lowest		
Total Trihalomethanes (TTHM)	Dec 2025	No	mg/L	0.026	0.026	0.026	0.080
Haloacetic Acids (HAA5)	Dec 2025	No	mg/L	0.023	0.023	0.023	0.060

Table 4. Inorganic Compounds

Substance	Date Sampled	Violation? Yes / No	Results	Unit	MCL
Barium	Aug 2025	No	0.0067	mg/L	2.0
Nitrate	June 2025	No	0.568	mg/L	10

Table 5. Radiological Compounds

Substance	Date Sampled	Violation? Yes / No	Average Results	Unit	MCL
Gross Alpha	3 rd & 4 th quarter of 2025	No	0.562	pCi/L	15
Combined Radium-226 and -228	3 rd & 4 th quarter of 2025	No	0.46	pCi/L	5
Gross Beta	3 rd & 4 th quarter of 2025	No	0.846	pCi/L	50

Table 6. 2025 Gwangju AB Monitoring Violations

Monitoring Violation	Explanation	Health Effects	Steps Taken to Correct the Violation
Missed monitoring for Nitrates, Nitrites.	Quarterly Monitoring is required in accordance with provisions of the KEGS. Sampling was missing for quarters 1,3, and 4.	Nitrates and nitrites, which present a severe, immediate medical emergency for infants under six months old by dangerously restricting oxygen in their blood.	BE established a sampling schedule for 2026 to ensure that all monitoring requirements will be met.
Copper exceeding Action Level	In Jun 2025 and Dec 2025, the Bioenvironmental Engineering (BE) flight conducted required semi-annual lead and copper water monitoring. The results indicated that the action level for copper was exceeded.	While copper is an essential nutrient, short-term exposure to high levels can cause gastrointestinal distress, including nausea, vomiting, and stomach cramps. However, long-term exposure can potentially lead to liver or kidney damage. It is important to address the action level exceedance to prevent these health risks.	The 8 MMS and entire base populace was informed via email on 20 January 2026. BE has advised all water consumers at Gwangju AB to flush their cold water tap for 30 seconds before using the water for drinking or cooking. This action helps clear out any inorganic materials, like copper, that may have settled in the pipes during periods of non-use.

			All records from this sampling event are maintained by BE, and the next round of lead and copper sampling is scheduled for June 2026 to monitor the effectiveness of corrective measures and ensure water quality.
Disinfection By-Product monitoring frequency.	Monitoring frequency is required based on the consumer population. One location was sampled quarterly and the KEGS requirement IAW Table G-7, DDBP Monitoring Requirements mandate two sampling locations.	While disinfection is vital for killing harmful germs, it creates byproducts that may increase cancer risk or cause organ and nervous system issues if consumed above MCL over many years.	BE has established a sampling schedule to ensure sampling requirements are completed as specified in KEGs.

Terms Defined

Action Level (AL) - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

DoW - Department of War.

EPA - United States Environmental Protection Agency.

HAA5 - Haloacetic Acids (bromochloroacetic acid, dichloroacetic acid, monobromoacetic acid, monochloroacetic acid, and trichloroacetic acid)

KEGS - Korean Environmental Governing Standards.

Maximum Contaminant Level (MCL) - 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.

Maximum Contaminant Level Goal (MCLG) - The level of a contaminant in drinking water below which there is no expected health risk. MCLGs allow for a margin of safety.

Part per million (ppm) – 1/1,000,000; One ppm corresponds to 1 minute in 2 years, or a single penny in \$10,000.

Part per billion (ppb) – 1/1,000,000,000; One ppb corresponds to 1 minute in 2,000 years, or a single penny in \$10,000,000.

Part per trillion (ppt) – 1/1,000,000,000,000; One ppt corresponds to 1 minute in 2,000,000 years, or a single penny in \$10,000,000,000.

SWDA – The U.S. Safe Drinking Water Act is a law passed by Congress in 1974 to protect public health by regulation public drinking water supplies. This law contains multiple provisions and details are available at <https://www.epa.gov/sdwa>.

TTHM - Total Trihalomethanes

For more information

Organization

8 OMRS Bioenvironmental Engineering
8 MMS Civil Engineering

DSN

315-782-6541
315-766-4569

Service Area

Drinking water quality concerns
Water treatment and distribution

E-mail: usaf.kunsan.8-mdg.mbx.8-omrs-sgxb@health.mil

GIMHAE AB HOSPITAL DRINKING WATER SYSTEM CONSUMER CONFIDENCE REPORT (CCR) 2026 (Covering Calendar Year 2025)

이 보고서에는 귀하의 식수에 대한 중요한 내용이 실려있습니다. 그러므로 이 보고서를 이해할 수 있는 사람한테 번역해달라고 부탁하시기 바랍니다. 보고서에 대한 질문은 오산 생물환경공학과 784-2623로 문의하시기 바랍니다.

This consumer confidence report provides the 2025 drinking water quality information for Gimhae Air Base (AB). This report is based on the data collected, assessed and documented by the Bioenvironmental Engineering Flight of the 51st Operational Medical Readiness Squadron (OMRS). It also includes information on how the 8th Materiel Maintenance Squadron's contractor, Global Systemized Industry (DSN: 787- 4309), operates and maintains the drinking water system. Please review this report for your information. If you have any questions, please call the Bioenvironmental Engineering Flight from the 8th OMRS at 782-6541.

Sampling to Ensure Your Water Quality

Bioenvironmental Engineering and Global Systemized Industry perform water testing to ensure your drinking water is the same quality that you would expect to have in the US. Your tap water met all US Environmental Protection Agency (EPA) and Korean Environmental Governing Standards (KEGS) for drinking water during calendar year (CY) 2025.

Please note that this report applies only to the hospital area on Gimhae AB. The facilities outside of the hospital area (Bear, ROKAF buildings, etc.) connect to a separate distribution system that ROKAF owns and operates. Global Systemized Industry personnel and Bioenvironmental Engineering have not tested the ROKAF system. Thus, we have no information to provide about the water quality in those areas.

Drinking Water Contaminants and Your Health

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 collects contaminants such as naturally occurring minerals, naturally occurring radioactive material or substances from human or animal activities. The contaminants that may be present in any water source 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.

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

Drinking water, including bottled water, may reasonably be expected to contain small amounts of contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. You can call the EPA Safe Drinking Water Hotline (1-800-426-4791) for more information about contaminants and potential health effects.

Vulnerable Individuals

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 living with HIV/AIDS or other immune system disorders, some elderly, and infants can be at greater risk of infections. These individuals should seek advice about drinking water from their health care providers. The EPA and the Centers for Disease Control (CDC) provide guidelines to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants. These guidelines are available from the Safe Drinking Water Hotline (1-800-426-4791).

Gimhae AB Water Source

The primary water source for Gimhae AB is the Nakdong River. The Nakdong River feeds the Mae-ri Reservoir. The reservoir supplies water to the Deoksan water treatment plant (WTP). The Deoksan WTP provides pre-ozonation, flocculation, settling, filtration, post-ozonation, filtration again with granulated activated carbon (GAC), and chlorination to the water before it is supplied to Gimhae AB. The hospital area has a dedicated WTP, which filters and disinfects the water through the addition of chlorine. Monitored Contaminants

Monitored Contaminants

During CY 2025, Global Systemized Industry and the Osan AB Bioenvironmental Engineering collected 257 samples to monitor 111 different contaminants. Also, Global Systemized Industry monitored chlorine levels daily and Bioenvironmental Engineering monitored chlorine levels weekly. Table 1 lists all of the contaminants monitored in CY 2025 and the required monitoring frequency for each contaminant group.

Table 1. CY 2025 Sample Contaminant Groups and Monitoring Frequencies

Contaminant Group	Number of Contaminants Monitored	Examples	Monitoring Frequency
Biological Contaminants	3	Total coliform, fecal coliform, etc.	Monthly
Inorganic Contaminants	16	Metals, fluoride, etc.	Annually
Nitrates, Nitrites	3	--	Annually
Volatile Organic Compounds (VOCs)	21	Benzene, toluene, trichloroethylene (TCE), etc.	Annually
Synthetic Organic Compounds (SOCs)	33	Pesticides, polychlorinated biphenyls (PCBs), etc.	Annually
Special Case Synthetic Organic Compounds (SOCs)	2	Pentachlorophenol and 2,4-D	Quarterly*
Total Trihalomethanes (TTHMs)	4	Bromoform, chloroform, etc.	Quarterly
Haloacetic acids (HAA5)	5	Monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, etc.	Quarterly

Lead and Copper	2	--	Every 3 years; sampled in CY 2023
Per- and polyfluoroalkyl substances (PFAS)	25	PFOA, PFOS, PFHxS, HFPO-DA, PFNA etc.	Quarterly from 4th quarter of CY25
Asbestos	1	-	Every 9 years; last sampled in CY 2025
Radiological Compounds	4	Gross alpha, uranium, radium 226/228, etc.	Not required to sample as classified Non-Transient Non-Community; last samples in CY 2011**

*Note: In 2018, Pentachlorophenol and, in 2025, 2,4-D were above the detection limit, but under the maximum contaminant level (MCL). Per the KEGS, increased monitoring is required until the water system is reliably and consistently below the MCL.

Table 2. CY 2025 Biological Sampling Results

Contaminant	MCLG	MCL	Level Detected	Meet Standard?
Total Coliform	0	0 positive sample/ month	0 positive samples	Yes
Fecal Coliform and E. coli	0	0 positive samples/ month	0 positive samples	Yes

Table 3 lists drinking water contaminants detected in CY 2025. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. For total trihalomethanes and haloacetic acids, compliance is based on the running average of all samples collected over a year. Therefore, if a single sample exceeds the MCL, but the average of all the readings for that year is less than the MCL, then the system complies.

Table 3. CY 2025 Detected Water Contaminants

CONTAMINANTS	EPA		KEGS	Your Water	Meet Standard?
	MCLG	MCL	MCL		
Inorganic Compound					
Barium in ppm	2	2	2	0.02	Yes
Nitrate [measured as Nitrogen in ppm]	10	10	10	1.74	Yes
Total Nitrate and Nitrite in ppm	NR	NR	10	1.74	Yes
Fluoride in ppm	4	4	4	0.10	Yes
Sodium in ppm	NR	NR	NR	10.0	Yes
Synthetic Organic Compound					
2,4-D in ppb	70	70	70	0.14	Yes
Disinfectant/Disinfection Byproducts					
TTHM	NR	80	80	Annual Average 52.1	Yes
HAA5	NR	60	60	Annual average 7	Yes

Table 4 lists asbestos that was detected in CY 2025. The result presented in this report is from the most recent testing done in accordance with the KEGS: the monitoring frequency of asbestos contaminant is every 9 years. The presence of regulated asbestos in the water does not necessarily indicate that the water poses a health risk.

Table 4. CY 2025 Asbestos Contaminant

Contaminant	EPA		KEGS MCL	Your Water	Meet Standard?
	MCLG	MCL			
Asbestos MFL	7	7	7	ND	Yes

PFAS Contaminant Monitoring

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?

Yes. On April 26, 2024, the Environmental Protection Agency (EPA) published a final National Primary Drinking Water Regulation for certain per- and polyfluoroalkyl substances (PFAS) under the Safe Drinking Water Act (SDWA). This rule went into effect on June 25, 2024, with a compliance deadline of April 26, 2029, five years from the date of publication. While the rule requires routine sampling for certain PFAS by no later than 2027, The Department of War (DoW) has been sampling drinking water for PFAS compounds at all DoW-owned and operated water systems since 2017. Under the new rule, the following limits, called Maximum Contaminant Levels (MCL), were established, and DoW water systems will need to meet these levels by April 2029.

Table 5. PFAS

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	Hazard Index (HI) of 1 (unitless)

For systems where DoW provides drinking water, the Department is collecting the necessary sampling information and is taking actions to ensure compliance within the required 5-year timeframe in accordance with the policy, published on September 28, 2025, for monitoring and treatment of PFAS in DoW drinking water system outside the United States.

Has Gimhae AB tested its water for PFAS?

Yes, In November 2025 samples were collected from the point of entry to drinking water system IAW the policy. The following PFAS compounds covered by the EPA PFAS drinking water rule were detected and provided in Table 6. Gimhae AB has been studying treatment alternatives to remove PFAS and will take actions as required by the policy. The water system will be periodically monitored as required by the policy to ensure continued compliance. Gimhae AB has to be in compliance with the EPA PFAS drinking water MCL by the required deadline of April 2029. For

more information on PFAS, please see Kunsan AB's webpage.

Table 6 lists the results of PFAS samples collected for CY 2025. The presence of substances in the water does not necessarily indicate that the water poses a health risk.

Table 6. CY 2025 PFAS Compounds

Contaminant	EPA	KEGS MCL	Your Water	Meet Standard?
	MCL			
Perfluorooctanoic acid (PFOA) in ppt	4.0	NR	4.94	Yes*
Perfluorooctanesulfonic acid (PFOS) in ppt	4.0	NR	ND	Yes
Perfluorohexanesulfonic acid (PFHxS) in ppt	10	NR	ND	Yes
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX) in ppt	10	NR	2.05	Yes
Perfluorononanoic acid (PFNA) in ppt	10	NR	ND	Yes
Perfluorobutanesulfonic acid (PFBS) in ppt	n/a	NR	5.24	N/A
Mixture of two or more: PFHxS, PFNA, HFPO-DA, and PFBS	Hazard Index of 1 (unitless)	NR	0.2	Yes

* According to EAP PFAS drinking water rule, public water systems have five years (by 2029) to implement solutions that reduce the PFAS levels in the water system. This only applies if results are above the new MCLs. Currently Gimhae AB has a project in place to reduce levels by 2029 to adhere to the new standard.

Where Can I Get More Information?

Currently, a routine public meeting for drinking water is not held at your installation. However, if you have any specific questions or concerns about your drinking water, please contact the Osan AB Bioenvironmental Engineering (BE) office at 784-2623. You can also contact the BE office for any additional information on drinking water or questions regarding this Consumer Confidence Report (CCR).

The Bioenvironmental Engineering Flight prepared this CCR and will post it on the 7th AF homepage (<http://www.7af.pacaf.af.mil/>).

Information about EPA water regulations can be found at <http://www.epa.gov>.

General information about Korean water sources in English and Korean can be found at: <http://www.kwater.or.kr>.

DEFINITIONS

Action Level (AL): The level of lead or copper which, if exceeded, triggers treatment or other requirements that a water system must follow.

Calendar Year (CY): The period from January 1 to December 31.

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

Maximum Contaminant Level Goal (MCLG): The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Non-detect (ND): The contaminant was not detected in the sample.

Not-Regulated (NR): The EPA and/or KEGS have not determined a regulatory limit for the contamination in drinking water.

Safe Drinking Water Act (SDWA): The main federal law that ensures the quality of Americans' drinking water. Under SDWA, EPA sets standards for drinking water quality and oversees the states, localities, and water suppliers who implement those standards.

Units

MFL: million fibers per liter (a measure of asbestos in drinking water)

pCi/L: picocuries per liter (a measure of radioactivity)

Parts per billion (ppb): A ppb is a thousandth of a ppm

Parts per million (ppm): Parts per million is the most used term to describe very small amounts of contaminants in our environment. It is a measure of concentration that describes the amount of one material in a larger amount of another material. For example, the amount of a chemical in a volume of water. If you divide a liter of water into a million parts, then each part would be equal to one part per million.

Parts per trillion (ppt): A ppt is a thousandth of a ppb