



2020 Annual Drinking Water Quality Report (Consumer Confidence Report)

RAMSTEIN AIR BASE, GERMANY

This report contains important information about your drinking water. If you do not understand it, please have someone explain or translate it for you.

Dieser Bericht enthält wichtige Informationen zu Ihrem Trinkwasser. Wenn Sie es nicht verstehen, lassen Sie es bitte von jemandem erklären oder übersetzen.

Introduction

We are pleased to present this year's Annual Drinking Water Quality Report (Consumer Confidence Report – CCR) as required by Air Force Instruction 48-144, Drinking Water Surveillance Program, and the Final Governing Standards for Germany (FGS-G). This report provides an overview of last year's (2020) drinking water quality and details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. We hope this report will raise your understanding of drinking water issues and awareness our need to protect your drinking water sources. Our goal is to provide you with a safe, quality, and reliable drinking water supply. We are committed to providing you with this information because informed customers are the best allies.

Water Sources

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, 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 waste water discharges, oil and gas production, mining, or farming.
 - Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
 - Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also, come from gas stations, urban storm water runoff, and septic systems.
 - Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.
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Where do we get our drinking water?

The Kaiserslautern Military Community (KMC) drinking water systems provide water to approximately 20,000 customers at Ramstein Air Base (AB). Bioenvironmental Engineering (BE) collects a total of 20 samples per month at multiple locations around the installation. Additional samples are collected to meet AF unique requirements and ensure water quality across the entire installation. Ramstein AB water systems are classified as community water systems by HQ USAFE/AFRICA and German Authorities.

KMC draws all its drinking water from deep wells several hundred feet below ground. Our water is pumped from these wells, treated, and then distributed to our communities. Within the KMC, there are many water distribution systems. Ramstein AB has one system, supplied by four water treatment facilities. The Cold Storage Area, located off site from Ramstein AB, has a separate system. Since 2016, the two Contingency Training Squadron systems are being supplied with potable water by the City of Ramstein-Miesenbach. Since November 2007, Vogelweh, including Kapaun Air Station, is supplied by the City of Kaiserslautern water provider Stadtwerke Kaiserslautern – SWK.

Drinking Water and Your Health

All 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 the water poses a health risk. More information on contaminants and potential health effects can be obtained by calling BE at DSN 479-2220 (0049-6371-46-2220). 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 (800-426-4791).

Is there Lead in my Water?

Although we regularly test lead levels in your drinking water, it is possible that lead and/or copper levels at your home are higher because of materials used in your plumbing. If present, elevated levels of lead can cause serious 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. Ramstein AB 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 and copper 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 at 1-800-426-4791 or <http://www.epa.gov/safewater/lead>.

A Final Word on Water Quality

Your water quality team at Ramstein AB works around the clock to provide safe, dependable water at every tap. But they can only ensure the success of today's mission if everyone contributes. Tomorrow's success will depend on all of us, working together, to protect our vital water resources.

Remember, the water we use does not quickly return to the aquifer, but is, for the most part, "consumed" by our actions. The military installation (Ramstein AB) and many nearby villages draw water from the same aquifer. Conservation is therefore essential to protect our water supply.

You should also consider ways you can reduce your water consumption, i.e. don't let the water run while brushing your teeth, take a shower vs. a bath. There are numerous ways to save our most valuable natural resource for us and the future of our children. If you have ideas to reduce usage and contamination of this valuable resource submit it to the Ramstein AB Drinking Water Quality Working Group (POC – BE). These efforts will help protect the future water supply by reducing the overall consumptive use.

Customer Reviews Welcome

We are available to address any questions or concerns you may have. Housing residents should contact the Housing Office with any water concerns. Dorm residents should contact their building manager.

For more information on this report or base drinking water quality, please call BE at DSN 479-2220 (0049-6371-462220) or the 86 CES Environmental Management Flight at DSN 480-7712.

About the Following Pages

The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. Although more than **90 contaminants** were tested, only those substances listed below were detected in our water. All sources of drinking water contain some naturally occurring contaminants. The FGS-G requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination.

Definitions and Abbreviations

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

Average: Regulatory compliance with some Maximum Contaminant Levels (MCLs) are based on running annual average of monthly samples.

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

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

Maximum Residual Disinfectant Level (MRDL): The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

millirems per year (mrem/year): a measure of radiation absorbed by the body.

Million Fibers per Liter (MFL): a measure of the presence of asbestos fibers that are longer than 10 micrometers.

Nephelometric Turbidity Units (NTU): Measurement of the clarity, or turbidity, of water.

Picocuries per Liter (pCi/L): Measurement of the natural rate of disintegration of radioactive contaminants in water (also beta particles).

pH: Measurement of acidity/basicity with 7.0 being neutral.

parts per million (ppm): One part substance per million parts water, or milligrams per liter.

parts per billion (ppb): One part substance per billion parts water, or micrograms per liter.

parts per trillion (ppt): One part substance per trillion parts water, or nanograms per liter.

Running Annual Average (RAA): Average results for the most recent four quarters.

Secondary Maximum Contaminant Level (SMCL): Recommended level for a contaminant that is not regulated and has no MCL.

Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

How to Read the Data Tables

Starting with a substance, read across. Year sampled is in 2020. MCL shows the highest level of substance (contaminant) allowed. MCLG is the goal level for that substance (this may be lower than what is allowed). Average Amount Detected represents the measured amount (less is better). Range tells the highest and lowest amounts measured. A 'Yes' under Compliance Achieved means the amount of substance met government requirements. Typical Source tells where the substance usually originates. Unregulated substances are measured, but maximum allowed contaminant levels have not been established by the government.

Water Quality Results

| Residual Disinfectants | Unit of Measure | MRDL | MRDLG | Average Level | Minimum Level | Maximum Level | Violation | Typical Source |
|-------------------------------|------------------------|-------------|--------------|----------------------|----------------------|----------------------|--|---|
| Free Available Chlorine | mg/L | 4 | 4.0 | 0.17 | 0.01 | 0.82 | No | Water additives used to control microbes |
| Fluoride | mg/L | 4.0 | 4.0 | 0.63 | 0.27 | 1.01 | No | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories |
| Contaminant | Unit of measure | MCLG | MCL | Level Found | Violation | | Typical Source | |
| Total Coliform | # of Positives | 0 | 5.0% | 0 | No | | Naturally present in the environment | |
| Barium | mg/L | 2.0 | 2.0 | 0.32 | No | | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits | |

| Contaminant | Unit of measure | MCLG | MCL | Level Found | Violation | Typical Source |
|-----------------------|------------------------|-------------|------------|--------------------|------------------|--|
| Nitrate | mg/L | 10 | 10 | 4.2 | No | Runoff from fertilizer use; leaking from septic tanks, sewage; erosion of natural deposits |
| Nitrite | mg/L | 1 | 1 | 0.15 | No | Runoff from fertilizer use; leaking from septic tanks, sewage; erosion of natural deposits |
| Total Trihalomethanes | mg/L | 0.080 | 0.080 | <0.0005 – 0.012 | No | By-products of drinking water chlorination |

| Lead and Copper | Units | MCLG | MCL | Level Found | 90th Percentile | # Sites Over AL | Violation | Typical Source |
|------------------------|--------------|-------------|------------|--------------------|-----------------------------------|------------------------|------------------|---|
| Lead | mg/L | 0 | 0.015 | 0.00029 | 0.0002 | 0 | No | Corrosion of household plumbing systems; erosion of natural deposits. |
| Copper | mg/L | 1.3 | 1.3 | <0.01 | 0.01 | 0 | No | Erosion of natural deposits; leaching from wood preservatives; corrosion of household plumbing systems. |

Violations

| Bromate | | | |
|--|------------------------|----------------------|--|
| <p>A life time of drinking bromate at levels above the MCL has an increased lifetime cancer risk of 2 in 10,000 – if consumed every day over the life time. Some people who ingested large amounts of bromate had gastrointestinal symptoms such as nausea, vomiting, diarrhea and abdominal pain. Some individuals who ingested very high concentrations of bromate also experienced kidney effects, and nervous system effects and hearing loss.</p> | | | |
| Violation Type | Violation Begin | Violation End | Violation Explanation |
| Monitoring | 2019 | TBD | <p>In 2019, BE did not perform sampling for Bromate. The failure to monitor on an annual basis, BE will have to conduct quarterly Bromate sampling.</p> <p>Due to COVID-19, BE only collected one sample from multiple locations in September of 2020 and did not meet the four quarterly sample requirement to remove violation from 2019.</p> <p>All of the results for Bromate were well below the MCL and therefore within drinking water quality standards.</p> <p>Violation ends when four consecutive quarterly samples have a resulting running average below the MCL.</p> |

| Nitrate & Nitrite | | | |
|---|------------------------|----------------------|--|
| <p>Nitrate and Nitrite levels above MCL in drinking water is a potential health risk for infants < 6 months of age as it can cause methoglobinemia (blue baby syndrome). Nitrate and Nitrite levels may rise quickly for short periods of time due to rainfall or agricultural activity. If you are concerned for an infant under your care, seek advice from your health care provider. Nitrate and Nitrite sources can be a result of runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.</p> | | | |
| Violation Type | Violation Begin | Violation End | Violation Explanation |
| Monitoring | 2019 | TBD | <p>In 2019, BE did not perform sampling for Nitrate and Nitrite. The failure to monitor on an annual basis, BE will conduct increased Nitrate and Nitrite sampling.</p> <p>Due to COVID-19, BE only collected one sample from multiple locations in September of 2020 and did not remove the violation from 2019.</p> <p>All of the results for Nitrate and Nitrite were well below the MCL and therefore within drinking water quality standards.</p> <p>Violation ends the annual running average concentration of Nitrate and Nitrite is below the MCL.</p> |