

2022 Water Quality Report

ADDITIONAL INFORMATION

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

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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

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 can be obtained by calling the **Environment Protection Agency's Safe Drinking Water Hotline (800-426-4791)**.

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. Brookings Municipal Utilities public water supply system 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.

DETECTED SUBSTANCES

The attached table lists all the drinking water contaminants detected during the 2022 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1 – December 31, 2022. The state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.



BROOKINGS
MUNICIPAL UTILITIES

Each year, Brookings Municipal Utilities monitors your drinking water for possible contaminants. This report is a snapshot of the quality of the water that we provided last year. Included are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards. We regularly test the city's drinking water to ensure compliance, and every year we share those results with our customers

We serve our customers an average of 2,578,000 gallons of water per day. Our water is groundwater that we withdraw and treat from local wells. The state has performed an assessment of our source water and they have determined that the relative susceptibility rating for the Brookings Municipal Utilities public water supply system is medium.

BROOKINGS MUNICIPAL UTILITIES WATER QUALITY INFORMATION

For information about your water, contact Eric Witt at (605) 692-6325.

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Per and polyfluoroalkyl substances, also referred to as PFAS chemicals have been used in a wide range of consumer and industrial products since the 1940's. These chemicals are known for their resistance to grease, oil, water, and heat and are common in stain and water resistant fabrics, carpeting, cleaning products, paints, and fire-fighting foam. These chemicals are durable compounds that break down very slowly over time and are sometimes referred to as 'forever chemicals' for their ability to persist in the environment. PFAS, as a class of chemicals, consists of thousands of individual chemical compounds.

EPA's fifth round of Unregulated Contaminant Monitoring Rule (UCMR5) will require water systems serving greater than 3,300 people to sample for 29 PFAS chemicals starting in 2023. BMU is scheduled to sample for UCMR5 in December 2023 and June 2024. In September 2022, BMU proactively tested for PFAS compounds at all nine municipal wells, along with the entry points to the drinking water system at both water treatment plants. Of the PFAS compounds analyzed, only one PFAS compound, PFBA, was detected as shown in the table of detected contaminants. PFBA is currently not being considered for regulation and EPA has not established any advisory levels for this particular PFAS compound at this time. In March, 2023, the U.S. Environmental Protection Agency (EPA) proposed draft drinking water standards for six (6) individual PFAS compounds, including PFOA, PFOS, PFBS, GenX (HFPO-DA), PFNA, & PFHxS. Please note that proposed drinking water standards remain a draft proposal until the formal adoption period is complete (earliest estimated effective date will be mid-2025) and as such are subject to change. The BMU test results did not detect any of the PFAS compounds listed in the EPA's pending drinking water standards. Once EPA's PFAS rule is effective, routine testing for PFAS will be required for drinking water systems and any detections will be included in future annual water quality reports.

2022 Table of Detected Regulated Contaminants for Brookings Municipal Utilities (EPA ID 0071)

Terms and abbreviations used in this table:

- 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.
- 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.
- Action Level (AL): the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow. For Lead and Copper, 90% of the samples must be below the AL.
- Running Annual Average (RAA): Compliance is calculated using the running annual average of samples from designated monitoring locations.

Units:

- ppm: parts per million, or milligrams per liter (mg/l)
- ppb: parts per billion, or micrograms per liter (ug/l)
- ppt: parts per trillion, or nanograms per liter (ng/l)
- pCi/l: picocuries per liter (a measure of radioactivity)
- ND: Non-Detect (below detection level)

Substance	90% Level	Test Sites > Action Level	Date Tested	Highest Level Allowed (AL)	Ideal Goal	Units	Major Source of Contaminant
Copper	0.0	0	07/29/22	AL=1.3	0	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Lead	10.7	2	08/03/22	AL=15	0	ppb	Corrosion of household plumbing systems; erosion of natural deposits.
Substance	Highest Level Detected	Range	Date Tested	Highest Level Allowed (MCL)	Ideal Goal (MCLG)	Units	Major Source of Contaminant
Alpha emitters	9.9	ND - 9.9	11/30/20	15	0	pCi/l	Erosion of natural deposits.
Anitimony	0.39	ND - 0.39	11/30/20	6	6	ppb	Discharge from petroleum refineries; fire retardants; ceramics; solder.
Arsenic	2	ND - 2	11/30/20	10	0	ppb	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	0.012	0.009 - 0.012	11/30/20	2	2	ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Chromium	1.9	1.6 - 1.9	11/30/20	100	100	ppb	Discharge from steel and pulp mills; erosion of natural deposits.
Fluoride	0.89	0.63 - 0.89	04/05/22	4	<4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Haloacetic Acids (RAA)	9.500		08/30/22	60	0	ppb	By-product of drinking water chlorination. Results are reported as a running annual average of test results.
Nitrate (as Nitrogen)	0.2	ND - 0.2	08/10/22	10	10	ppm	Runoff from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits, discharge from mines.
Selenium	2.2	0.51 - 2.2	11/30/20	50	50	ppb	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
Total Trihalomethanes (RAA)	42.00		08/30/22	80	0	ppb	By-product of drinking water chlorination. Results are reported as a running annual average of test results.
Perfluorobutanoic Acid (PFBA)	2.5	ND - 2.5	9/19/22			ppt	Discharge from chemical facilities