

UNIT WELL #23

Drilled in 1958, Unit Well 23 has a pumping capacity of 1200 gallons per minute. In recent years, it has become a seasonal well generally operating from April through October. In 2017 year, Well 23 operated only briefly in August due to mechanical problems. **The well did not serve any Madison taps in 2018 or 2019.** The well primarily serves Madison's Eastside neighborhoods including East Buckeye, Rolling Meadows, Elvehjem, and Heritage Heights. In 2017, Well 23 pumped 22 million gallons compared to the 5-year average of 65 million gallons annually.

Unless otherwise noted, data contained in this report, which is updated annually, are from **2017**.

Bacteria

In 2019, one water sample was collected from Well 23 and tested for coliform bacteria, an indicator group of bacteria used to determine drinking water safety. The sample was not found to have coliform bacteria present. This one sample was untreated groundwater. The Water Utility chlorinates drinking water to protect against bacteria and viruses that can be present in groundwater.

Hardness and Other Minerals

Like all groundwater, water from Well 23 contains calcium and magnesium that contributes to its hardness (458 mg/L [ppm] or 27 grains per gallon). Other naturally occurring constituents that are present in water from Well 23 can be found in the [Inorganics Table](#).

Iron and Manganese

Water from Well 23 contains low levels of iron and an intermediate amount of manganese. At elevated levels these minerals can discolor the water. Water containing iron or manganese above the EPA [secondary standards](#), 0.3 mg/L and 50 µg/L, respectively, may cause staining of laundry or plumbing fixtures.

Sodium

The level of [sodium](#) in Well 23 water exceeds the EPA guideline which recommends drinking water not to exceed 20 mg/L sodium. These guidelines are intended for higher risk populations including individuals with high blood pressure or on severe sodium restricted diets. In 2017, sodium at Well 23 measured 36 mg/L. Road salt application likely contributes to elevated sodium levels at some Madison wells.

Chromium

Low levels of naturally occurring chromium, including hexavalent chromium, have been found at Well 23. The level is well below the existing drinking water standard of 100 µg/L for total chromium. More information can be found on the [chromium](#) page.

Lead

Madison's groundwater supply does not contain significant amounts of naturally occurring lead.

Radionuclides

In 2014, water from Well 23 was tested for radium-226, radium-228, and other gross measures of radiation in water. Combined radium (226+228) measured 1.4 picocuries per liter (pCi/L) – well below the maximum contaminant level (MCL) of 5 pCi/L.

Naturally occurring, radioactive elements are found in rock, soil, water, and air. They derive from the creation of our planet and enter our bodies when we drink water, breathe air, and eat foods that contain them. Everyone is exposed to some level of radiation in everyday life. For example, uranium and thorium are found in rock and soil. In time, they decay to other elements including radium, which later decays to radon gas. Radon is the largest contributor to our daily exposure of radiation from the natural world. More information is available from the Agency for Toxic Substances and Disease Registry ([ATSDR](#)).

See [ATSDR](#) for more information on radon.

Man-made Contaminants

Madison Water Utility annually tests all of its municipal wells for man-made contaminants that may be present in groundwater. Except for disinfection by-products (DBP), no other volatile organic compound (VOC) was detected at Well 23 in 2017. DBPs form when chlorine interacts with impurities in groundwater. The chlorine is added to disinfect the water and guard against bacterial growth in water mains.

The [Volatile Organic Compounds](#) table shows the list of substances that were tested, the results, and how the detected levels compare with the maximum contaminant levels (MCL) established by the EPA.

Per- and Polyfluoroalkyl Substances (PFAS)

Ten different [PFAS](#) were found at Well 23 in 2019. The combined PFAS level is estimated to be 43 ng/L or parts per trillion (ppt). Although there is no state or federal drinking water standard for any PFAS, Wisconsin Department of Health Services recommended a health-based groundwater standard of 20 ppt for two PFAS (PFOA & PFOS). Our website, [madisonwater.org](#), has more information about PFAS in drinking water.

Additional Information

Information on routine [water quality monitoring](#) activities, including current test results and links to additional resources, is available at [madisonwater.org](#). In addition, you can sign-up to receive periodic updates on Madison drinking water quality or the water main flushing program through the [City of Madison](#) website.

If you have questions about the information in this report or on our website, our staff would be happy to answer them. Please call the Water Quality line at 266-4654 weekdays from 7:45 a.m. to 4:00 p.m.

Click [here](#) to view water quality reports for other Madison municipal wells.