

UNIT WELL #19

Drilled in 1970, Unit Well 19 has a pumping capacity of 2360 gallons per minute. It operates year-round and primarily serves the University of Wisconsin campus area and the Regent neighborhood. In 2022, Well 19 pumped 419 million gallons of water compared to its 5-year average of 358 million gallons annually.

Unless otherwise noted, data contained in this report, which is updated annually, are from 2022.

Bacteria

In 2022, four quarterly samples were collected from Well 19 and tested for coliform bacteria, an indicator group of bacteria used to determine drinking water safety. Each sample was collected and tested prior to any disinfection. None of the samples had coliform bacteria present. The Water Utility chlorinates drinking water to protect against bacteria and viruses that can be present in groundwater and to provide additional protection as the water travels through water mains and premise plumbing.

Hardness and Other Minerals

Like all groundwater, water from Well 19 contains calcium and magnesium that contributes to its hardness (293 mg/L [ppm] or 17 grains per gallon). Other naturally occurring constituents that are present in water from Well 19 can be found in the [Inorganics Table](#).

Iron and Manganese

Water from Well 19 contains fairly high levels of both iron and manganese, minerals that can discolor the water. Water containing iron and manganese above the EPA [secondary standards](#), 0.3 mg/L and 50 µg/L, respectively, may cause staining of laundry or plumbing fixtures.

Instances of discolored water are random, infrequent, and temporary; the water usually clears up in 15-30 minutes without additional action. Running a lower-level cold water tap at full force for a few minutes usually flushes out the minerals that cause the discoloration. If the color persists, call the Water Utility at (608) 266-4654. You should not use discolored water for drinking or cooking; instead run the water until it clears.

Chromium

Tests have not found hexavalent chromium at Well 19. Chromium is known to be present in the aquifer; however, it is believed that the chemical environment in the Mt. Simon aquifer inhibits the release of chromium into groundwater. More information is found on the [chromium](#) page.

Lead

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

Radionuclides

In 2022, water from Well 19 was tested four times for radium. Combined radium (226+228) ranged from 2.6 to 4.0 picocuries per liter (pCi/L), the standard unit of measurement for radiation in water. While radium occasionally tests above 5 pCi/L, compliance with the drinking water standard is based on the running annual average (RAA) which must stay below 5 pCi/L. The RAA at Well 19 peaked at 4.8 pCi/L in late 2019, and stood at 3.5 pCi/L in November 2022.

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.

Human-made Contaminants

Madison Water Utility annually tests all of its municipal wells for human-made contaminants that may be present in groundwater. Except for three disinfection by-products (DBP), no other volatile organic compound (VOC) was detected at Well 19 in 2022. 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)

All Madison wells were tested for PFAS in 2022. No [PFAS](#) were detected at Well 19. In 2022, the Wisconsin Department of Natural Resources adopted drinking water standards for PFOA & PFOS set at 70 ppt. In March 2023, the US Environmental Protection Agency proposed standards for six PFAS contaminants. Our website, [madisonwater.org](#), has more detailed 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.