

UNIT WELL #19

Drilled in 1970, Well 19 has a pumping capacity of 2,360 gallons per minute. It operates year-round and primarily serves the University of Wisconsin campus area and the Regent neighborhood. In 2023, Well 19 pumped 466 million gallons of water compared to its 5-year average of 383 million gallons annually.

Unless otherwise noted, data contained in this report, which is updated annually, are from 2023.

Bacteria

In 2023, 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 protection as 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 (300 mg/L [ppm] or 18 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 that contains 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. **Coming in 2025:** Filters are being added to Well 19, which will reduce iron and manganese levels in the water delivered by the well.

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 2023, water from Well 19 was tested four times for radium. Combined radium (226+228) ranged from 0.8 to 5.0 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) of quarterly samples which must stay below 5 pCi/L. The RAA at Well 19 peaked at 4.8 pCi/L in late 2019, has been gradually decreasing since then, and stood at 3.2 pCi/L in November 2023. The filter being added to mitigate iron and manganese is also expected to reduce radium levels at the well.

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 2023. DBPs form when chlorine interacts with impurities in groundwater. Chlorine is added to disinfect the water and guard against bacterial growth in water mains.

The [Volatile Organic Compounds](#) table lists the 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 2023; none 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 April 2024, the US Environmental Protection Agency published final federal MCLs that were set at 4 ppt. 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.