

UNIT WELL #27

Drilled in 1989, Unit Well 27 has a pumping capacity of 2200 gallons per minute. It operates seasonally, typically from April through October, and primarily serves neighborhoods south and east of the UW campus including homes in Dudgeon-Monroe, Greenbush, Vilas, South Campus, and State-Langdon neighborhoods. During 2019, Well 27 pumped 142 million gallons compared to its 5-year average of 191 million gallons annually.

Unless otherwise noted, data contained in this report, which is updated annually, are from 2019.

Bacteria

In 2019, fifteen water samples were collected from Well 27 and tested for coliform bacteria, an indicator group of bacteria used to determine drinking water safety. None of the samples were found to have coliform bacteria present. Most samples (12) were chlorinated water while three were untreated groundwater. The Water Utility chlorinates tap water to protect against bacteria and viruses that can be present in groundwater.

Hardness and Other Minerals

Like all groundwater, water from Well 27 contains calcium and magnesium that contributes to its hardness (345 mg/L [ppm] or 20 grains per gallon). Other naturally occurring constituents that are present in water from Well 27 can be found in the [Inorganics Table](#).

Iron and Manganese

Water from Well 27 contains intermediate levels of both iron and manganese, two minerals that at elevated levels can discolor the water. The EPA [secondary standards](#) for iron and manganese are 0.3 mg/L and 50 µg/L, respectively. Water containing iron or manganese above these levels may cause staining of laundry or plumbing fixtures.

Instances of colored water are random, infrequent, and temporary; the water usually clears up in 15-30 minutes without additional action. Running a 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 266-4654. You should not use colored water for drinking or cooking; rather run the water until it clears.

Chromium

Tests have not found hexavalent chromium at Well 27. 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 2019, water from Well 27 was tested three times for radium-226, radium-228, and other gross measures of radiation. Combined radium (226+228) ranged between 4.1 and 4.8 picocuries per liter (pCi/L), which is 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. A trace amount of [tetrachloroethylene](#) was found at Well 27 in 2019. One disinfection by-product (DBP) was also detected. 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 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)

Nine different [PFAS](#) were found at Well 27 in 2019. The combined PFAS level is estimated at 6 ng/L or parts per trillion (ppt). While 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 types of 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.