

UNIT WELL #8

Drilled in 1945, Well 8 has a pumping capacity of 1980 gallons per minute. It is a seasonal well that generally operates only during summer months due to elevated levels of iron and manganese in the water. In 2020, however, Well 8 also delivered water to the system from September through December due to Well 15 being out of service. The well primarily serves the Schenk-Atwood-Starkweather-Yahara and Marquette area homes east of the Yahara River. In 2020, Well 8 pumped 77 million gallons of water. The 5-year average is 74 million gallons pumped annually.

In recent years, pumping at Well 8 was also reduced due to concerns about the long-term potential movement of the groundwater contaminants from the Madison Kipp Corporation plume toward the municipal well. Neither tetrachloroethylene (PCE) nor trichloroethylene (TCE) has been detected at the well. The water utility hired an independent groundwater expert to review the groundwater modeling and analysis performed by the consultant for Madison Kipp. The summary report can be found [here](#). Long-range plans include re-construction of the well house and addition of an iron-manganese filter. In the interim, Water Utility staff continues to work with city, county, and state agencies as the groundwater cleanup continues.

Unless otherwise noted, data contained in this report, which is updated annually, are from 2020.

Bacteria

In 2020, three quarterly samples were collected from Well 8 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 may be present in groundwater and to provide additional protection as the water travels through water mains and premise plumbing.

Iron and Manganese

Water from Well 8 contains fairly high levels of both iron and manganese, two minerals that can discolor the water. Water that contains iron or manganese above the EPA [secondary standards](#), 0.3 mg/L and 50 µg/L, respectively, may stain laundry and 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; instead run the water until the color clears.

Lead

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

Hardness and Other Minerals

Like all groundwater, water from Well 8 contains calcium and magnesium that contribute to its hardness (340 mg/L [ppm] or 20 grains per gallon). Other naturally occurring constituents that are present in water from Well 8 can be found in the [Inorganics Table](#).

Chromium

Tests have not found hexavalent chromium at Well 8. Because chromium is known to be present in the aquifer, it is believed that the chemical environment in the Mt. Simon aquifer does not allow the release of chromium into groundwater. More information, including complete test results, can be found on the [chromium](#) page.

Radionuclides

In 2020, water from Well 8 was tested for radium-226, radium-228, and other gross measures of radiation. Combined radium (226+228) ranged from 3.0 to 4.0 picocuries per liter (pCi/L) – 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 three disinfection by-products (DBP), no other volatile organic compound (VOC) that we test for was detected at Well 8. DBPs detected at the well are formed when chlorine interacts with impurities in groundwater.

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)

Eight different [PFAS](#) were found at Well 8 in 2020. The combined PFAS level is estimated at 8.4 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.