

UNIT WELL #9

Drilled in 1951, Well 9 has a pumping capacity of 1640 gallons per minute. It operates year-round and provides water to neighborhoods between Monona Dr and Stoughton Rd south of Cottage Grove Rd. The well also serves Madison locations between Walter St and Cottage Grove Rd south of the Isthmus Bike Path/Wisconsin Southern railroad tracks, and east of Stoughton Road generally from Helgesen Drive south to the Beltline. In 2020, Well 9 pumped 161 million gallons of water compared to its 5-year average of 260 million gallons annually.

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

Bacteria

In 2020, four quarterly samples were collected from Well 9 and tested for coliform bacteria, an indicator group of bacteria used in determining 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 Unit Well 9 contains calcium and magnesium that contributes to its hardness (420 mg/L [ppm] or 25 grains per gallon). Other naturally occurring constituents that are present in water from Well 9 can be found in the [Inorganics Table](#).

Iron, Lead, and Manganese

Water from Well 9 does not contain significant amounts of iron, lead, or manganese.

Sodium

The level of [sodium](#) in Well 9 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 2020, the sodium level at Well 9 measured 28 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 9. The level is well below the drinking water standard of 100 µg/L for total chromium. More information can be found on the [chromium](#) page.

Radionuclides

In 2020, water from Well 9 was tested for radium-226, radium-228, and other gross measures of radiation in water. Combined radium (226+228) measured 2.0 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. Quarterly samples are collected at Well 9 due to the presence of [tetrachloroethylene](#) (PCE), which has been found since the early 1990's. In 2020, the level of PCE ranged from 1.5 to 1.9 µg/L; the maximum contaminant level (MCL) is 5 µg/L. A small amount of three disinfection by-products (DBP) was detected at Well 9. DBPs form when chlorine reacts with impurities in groundwater. Chlorine is added to disinfect water and to guard against bacterial growth in water mains.

Two other contaminants (ethylbenzene and xylene) were found during routine testing. These chemicals are not found in the source water but rather derive from a protective coating applied to the interior surface of the storage reservoir when it was recently painted. Periodic testing has also found small amounts (0.1 µg/L) of [1,4-dioxane](#); an MCL has yet to be established.

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

Per- and Polyfluoroalkyl Substances (PFAS)

Ten different [PFAS](#) were found at Well 9 in 2020. The combined PFAS level measured 47 ng/L or parts per trillion (ppt). PFBA accounted for nearly 80% of the PFAS present. 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 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.