

UNIT WELL #14

Drilled in 1960, Well 14 has a pumping capacity of 2450 gallons per minute; however, the pump typically delivers 1440 gallons per minute through the use of a variable frequency drive. It operates year-round and serves Madison's West side neighborhoods including Spring Harbor, Old Middleton Greenway, Sunset Village, and Regent. Well 14 also serves the Village of Shorewood Hills and parts of the University of Wisconsin campus. In 2021, Well 14 pumped 652 million gallons compared to its 5-year average of 754 million gallons annually.

Unless otherwise noted, data contained in this report, which is updated annually, are from 2021.

Bacteria

In 2021, four quarterly samples were collected from Well 14 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 these samples had coliform bacteria present. The Water Utility chlorinates all 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 14 contains calcium and magnesium that contributes to its hardness (489 mg/L [ppm] or 29 grains per gallon). Other naturally occurring constituents that are present in water from Well 14 can be found in the [Inorganics Table](#).

Iron, Lead, and Manganese

Water from Well 14 does not contain significant amounts of iron, lead, or manganese.

Chromium

Low levels of naturally occurring chromium, including hexavalent chromium, have been found at Well 14. The level is well below the existing drinking water standard of 100 µg/L for total chromium. More information can be found on the [chromium](#) page.

Sodium

The level of [sodium](#) in Well 14 water exceeds an 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 2021, sodium at Well 14 measured 60 mg/L. Road salt application likely contributes to elevated sodium levels in water pumped from some Madison wells.

Radionuclides

In 2020, water from Well 14 was tested for radium-226, radium-228, and other gross measures of radiation in water. Combined radium (226+228) measured 1.1 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 wells for man-made contaminants that may be present in groundwater. A small amount of [tetrachloroethylene](#) (PCE) has been found at Well 14 since the early 1990's. The level is stable or slightly decreasing over the last decade. A small amount of trichlorotrifluoroethane and two disinfection by-products (DBP) was also detected at Well 14 in 2021. DBPs form when chlorine reacts with impurities in groundwater. Chlorine is added to disinfect water and to guard against bacterial growth in water mains.

Periodic testing over the last five years has also found small amounts (0.1 µg/L) of [1,4-dioxane](#) at Well 14; 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 maximum contaminant levels (MCL) established by the EPA.

Per- and Polyfluoroalkyl Substances (PFAS)

Eight different [PFAS](#) were found at Well 14 in 2021. The combined PFAS level is estimated at 15 ng/L or parts per trillion (ppt). Although there is no state or federal drinking water standard for any PFAS, in 2019 the Wisconsin Department of Health Services recommended a health-based groundwater standard of 20 ppt for two types of PFAS (PFOA & PFOS) and in 2021 the Wisconsin Department of Natural Resources proposed a matching drinking water standard. 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.