

UNIT WELL #7

Drilled in 1939, Well 7 has a pumping capacity of 2200 gallons per minute. The well primarily serves the Village of Maple Bluff; Sherman Ave neighborhoods south of Almo Ave/Sheridan St and west of Packers Ave; and occasionally areas of the Isthmus between Livingston St and the Yahara River. During 2013, Well 7 pumped 333 million gallons of water compared to its 5-year average of 269 million gallons annually.

Beginning in summer 2014, the Well 7 facility will be completely re-constructed with a larger reservoir, multiple pumps for redundancy, and new iron and manganese filtration. The station is expected back in service in summer 2015.

Unless otherwise noted, data contained in this report, which is updated annually, are from 2013.

Bacteria

In 2013, thirty-six water samples were collected from Well 7 and tested for coliform bacteria, an indicator group of bacteria used in determining drinking water safety. None of the samples had coliform bacteria present. The majority of samples (32) were from chlorinated water while four samples were untreated groundwater. The Water Utility chlorinates drinking water to protect against bacteria and viruses that can be present in groundwater.

Hardness and Other Minerals

Like all groundwater, water from Well 7 contains calcium and magnesium that contributes to its hardness (372 mg/L [ppm] or 22 grains per gallon). Other naturally occurring constituents that are present in water from Well 7 can be found in the [Inorganics Table](#).

Chromium

Tests have not found hexavalent chromium at Well 7. 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. Currently, the utility performs semi-annual testing for total and hexavalent chromium. More information, including complete test results, can be found on the [chromium](#) page.

Lead

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

Iron and Manganese

Water from Well 7 contains a fairly high level of iron and an intermediate level of manganese. At elevated levels these naturally occurring minerals can discolor the water. Water containing iron or manganese above the US EPA [secondary standards](#), 0.3 mg/L and 50 µg/L, respectively, 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 coldwater 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.

The Water Utility has decided to filter water from Well 7 to remove the iron and manganese due to the unacceptable potential for discolored water and staining of laundry and plumbing fixtures. Construction of the treatment facility is expected to begin in summer 2014. The filter plant should be operational by summer 2015. Additional information can be found on the [Well 7](#) project page.

Radionuclides

In 2011, water from Well 7 was tested for radium-226, radium-228, and uranium in addition to other gross measures of radiation in the water. Combined radium measured 3.1 picocuries per liter (pCi/L) while uranium tested at 0.6 micrograms per liter (µg/L). These levels are below the maximum contaminant level (MCL) of 5 pCi/L combined radium and 30 µg/L uranium.

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. Besides three disinfection by-products (DBP), no other volatile organic compound (VOC) was detected in 2013. DBPs form when chlorine interacts with impurities in groundwater. Chlorine is added to disinfect the water and guard against microbial 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.

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 7:30 a.m. to 4:00 p.m.

Click [here](#) to view water quality reports for other Madison municipal wells.