

UNIT WELL #9

Drilled in 1951, Well 9 has a pumping capacity of 1700 gallons per minute. It operates year-round and provides water to neighborhoods between Monona Drive and Stoughton Road south of Cottage Grove Road. The well also serves Madison locations south of Pflaum Road and between Walter Street and Cottage Grove Road south of the Isthmus Bike Path/Wisconsin Southern railroad tracks. In 2010, Well 9 pumped 445 million gallons of water.

Unless otherwise noted, data contained in this report, which is updated annually, are from 2010.

Bacteria

In 2010, one hundred two samples were collected from Well 9 and tested for [coliform bacteria](#), an indicator group of bacteria used in determining drinking water safety. None of the samples were found to have coliform bacteria present. The majority of samples (98) were 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 Unit Well 9 contains calcium and magnesium that contributes to its hardness (419 mg/L [ppm] or 24 grains per gallon). Other naturally occurring constituents that are present in water from Well 9 can be found in the [2010 Inorganics](#) table.

Links to the [2006](#), [2007](#), [2008](#), and [2009](#) Inorganics tables

Iron, Lead, and Manganese

Water from Well 9 does not contain significant amounts of [iron](#), [lead](#), or [manganese](#).

Radionuclides

In 2009, water from Well 9 was tested for radium-226, radium-228, and uranium in addition to other gross measures of radiation in the water. Combined radium measured 0.8 picocuries per liter (pCi/L) while uranium tested at 0.5 micrograms per liter (ug/L). These levels are below the maximum contaminant level (MCL) of 5 pCi/L combined radium and 30 ug/L uranium.

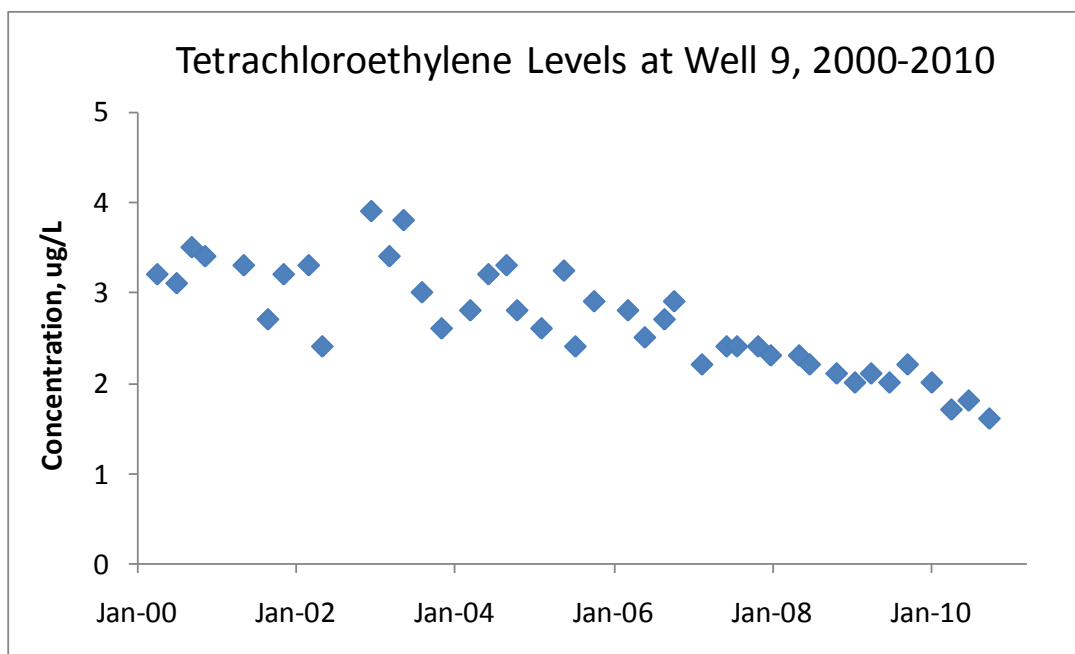
Naturally occurring, radioactive elements are found in rock, soil, water, and air. They derive from the creation of our planet and enter our bodies when we drink water, breathe air, and eat foods that contain them. Everyone is exposed to some level of radiation in everyday life. For

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](#)) and [Duke University](#).

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 currently collected at Well 9 due to the presence of [tetrachloroethylene](#) which has been detected since the early 1990's. The level of tetrachloroethylene peaked at 3.9 ug/L, in 2002, and it has been steadily decreasing since then. In 2010, the level ranged from 1.6-2.0 ug/L. The figure below shows how the level has varied over the last decade.



In addition, [1,1,1-trichloroethane](#) was found in one sample and low levels of [disinfection by-products](#) (DBP) were detected at Well 9 in 2010. DBPs form when the chlorine reacts with impurities in groundwater. Chlorine is added to disinfect water and to guard against bacterial growth in water mains.

The [2010 Volatile Organic Compounds](#) table shows the substances that were tested, the results, and how the detected levels compare with the maximum contaminant levels (MCL) established by the EPA.

Links to the [2006](#), [2007](#), [2008](#), and [2009](#) Volatile Organic Compounds tables

Unregulated Contaminants

Unregulated contaminants are substances for which a maximum contaminant level (MCL) has not been established. The Safe Drinking Water Act (SDWA) requires that the Environmental Protection Agency establish criteria for a program to monitor unregulated contaminants and to publish a list of contaminants to be monitored every five year. Monitoring for these substances provides occurrence and exposure data that help the regulatory agency determine whether these contaminants should be regulated.

Water samples were collected at Well 9 in both 2008 and 2009 and analyzed for 25 potential contaminants including pesticides, their degradates, disinfection by-products, flame retardants, and explosives. None of the 25 contaminants were detected at Well 9. Additional information about the regulation and the monitored contaminants can be found on the [EPA](#) website.

Additional Information

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

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.