

Waukesha shuts down deep well for repairs

Impact on radium compliance expected to be minimal

By Don Behm

Journal Sentinel, November 15, 2016

A contractor for the [Waukesha Water Utility](#) this week is pulling 800 feet of pipe out of the city's most productive deep sandstone well under an emergency repair that will not be completed until the end of the month, Water Utility General Manager Dan Duchniak said Tuesday.

Well 10 on the city's north side is treated to remove radium but the temporary shutdown prompted the utility to turn on a standby deep well without radium treatment to meet customers' needs over the next few weeks, Duchniak said. Well 10 was shut off Monday. Use of standby well seven will cause the city to exceed federal limits on radium in the community's drinking water for the remainder of November.

Recent tests of water from the standby well found that it contained 5.18 picocuries of radium per liter of water, slightly more than the federal standard of 5 per liter, Duchniak said. A picocurie is a measurement describing the rate of radioactive decay. City residents and others drinking municipal water this month will not face an immediate health risk, however, because [federal limits](#) are set to protect consumers who drink radium-contaminated water over a lifetime, according to Duchniak. Long-term exposure to elevated levels of radium in drinking water may result in an increased risk of bone cancer.

This is the third time in six years that well 10 has been [shut down for emergency repairs](#), records show. The well pump failed and had to be replaced in February 2011 and September 2013.

Well 10 is 2,150 feet deep and draws radium-contaminated water from saturated sandstone.

The 700 horsepower pump for the well is attached to the end of the pipe 800 feet below the surface and the entire assembly must be removed and inspected this week to determine the cause of a recent loss of production and loud vibrations that shook the pipe, Duchniak said. The city's Water Commission approved the emergency repair work at a special meeting Nov. 10.

Workers for the Waupun-based contractor, [Municipal Well & Pump](#), are using a four-story-tall crane to lift the pipe 20 feet at a time. After a 20-foot section is detached from the pipe, another section is lifted up.

After the previous two pump failures, the utility purchased an extra pump and set of pipes as a precaution in case of further problems, Duchniak said. Storing the equipment will significantly reduce the time needed for repair work. The city has waited four to six

weeks for a replacement pump or pump motor in the past.

Waukesha intends to stop using its 10 groundwater wells, including seven deep sandstone wells, when it begins buying Lake Michigan water from Oak Creek several years from now. Those deep wells [provide about 85%](#) of the city's water needs.

In June, delegates for the governors of the eight Great Lakes states unanimously [approved Waukesha's request](#) for a lake water supply.

Editorial: [Great Lakes governors make the right decision on Waukesha](#)

The city will pump no more than an average of 8.2 million gallons a day of lake water by midcentury, and return 100% of the volume to the lake as fully treated wastewater, under terms of a 2008 federal law known as the Great Lakes Compact.

Waukesha's lake water supply plan will cost an estimated \$207 million or more. The city will build one set of pipelines and pumping stations to divert lake water to Waukesha and a second set of pipes and pumps to return an equal volume to the Root River, a lake tributary.

One of the city's next steps is to receive state permits to construct and operate the system.

<http://www.jsonline.com/story/news/local/waukesha/2016/11/15/waukesha-shuts-down-deep-well-repairs/93894114/>