

Waukesha's Lake Michigan water application moves to next phase

By [Andrew Weiland](#)

Mandated to improve the quality of its drinking water, which has high levels of radium, City of Waukesha officials first sought permission five years ago to get water from Lake Michigan.

Finally, that process is about to move from the application phase to the approval phase.

By the end of this month, the state Department of Natural Resources is expected to release its draft environmental impact statement and technical review of Waukesha's application for Lake Michigan water.



"It's exciting to be entering the next phase of the project," said Dan Duchniak, general manager of the Waukesha Water Utility. "We have been informed by the DNR that they have all of the information that they need from us."

Under the Great Lakes Compact, which was adopted in 2008, approval from the governors of each of the eight Great Lakes states is required for any water diversion outside of the Great Lakes basin. The only communities outside of the basin that can apply for diversions of Great Lakes water are those in counties that straddle the subcontinental divide at the edge of the basin, such as Waukesha County. If a community such as Waukesha is allowed to divert Great Lakes water, it must return its treated wastewater to the Great Lakes basin.

Waukesha must also demonstrate that it needs Great Lakes water to meet its water supply needs.

"It is a high standard (for communities outside of the Great Lakes basin to tap Great Lakes water)," said Eric Ebersberger, water use section chief for the DNR. "The criteria of the compact are strict. It sets a high bar."

The radium contamination in Waukesha's water comes from the deep aquifer from which the city draws the vast majority of its water supply. Some other communities in the county that had radium in their water supply have added equipment to remove radium from the water.

However, Waukesha wanted a solution that would also eliminate other contaminants, not just radium, in its water and would provide a long-term solution for the city's water needs. After years of numerous studies, city officials determined that tapping Great Lakes water was by far the best long-term option.

"The Great Lakes is the only viable alternative," Duchniak said.

After the DNR releases the draft environmental impact statement and technical review, a 45-day public comment period begins. That period will include public hearings on the Waukesha application. The number and location of those meetings has yet to be determined, Ebersberger said.

Waukesha plans to get Lake Michigan water from Oak Creek. The \$200 million project would add 30 miles of pipeline to send the water about 15 miles west to Waukesha and 15 miles of pipe to send it back. The city's treated water would be discharged into the Root River. Waukesha has an option to purchase a site at South 60th Street and Oakwood Avenue in Franklin, where the water will be discharged into the river.

The city of Oak Creek would benefit from adding Waukesha as a water customer. Oak Creek would gain about \$4 million to \$5 million per year by selling water to Waukesha, Duchniak said.

A combination of federal and state grants and loans, and city borrowing, would be used to pay for the \$200 million Lake Michigan water project for Waukesha, Duchniak said. Any city costs would be paid back by water utility revenues, he said.

It would be less expensive to pipe Lake Michigan water from the City of Milwaukee to Waukesha, but Milwaukee officials refused to provide water to customers outside of Waukesha's existing municipal boundaries, Duchniak said. Waukesha is required by state law to take future growth expectations into account as it plans for its water needs, he said.

"We couldn't negotiate that way," Duchniak said. "We tried to negotiate (with Milwaukee officials). Unfortunately, it didn't work out."

In 2012, the city of Waukesha estimated that it would cost about \$8 million more to get Lake Michigan water from Oak Creek than from Milwaukee, and that the average homeowner's water bill in Waukesha would be about \$5 higher per month to get the water from Oak Creek than from Milwaukee.

The cost difference between piping water farther, from Oak Creek instead of from Milwaukee, is mitigated somewhat by the lower cost of installing pipes in the less developed path from Oak Creek to Waukesha, as opposed to the more urbanized path from Milwaukee to Waukesha, Duchniak said. The water pipes will primarily be installed along existing road right of way, he said.

"We don't expect a high level of issues (with the right of way)," Duchniak said. "We will just have to work through all of the challenges."

Waukesha officials hope to receive approval from all of the Great Lakes governors to tap Lake Michigan water sometime in 2016. The design and construction process for the piping system will take about three years, so the earliest it could be operational is 2019. However, 2020 is a more reasonable expectation, Duchniak said.

"It's a huge construction project," he said.

The treated water that Waukesha discharges into the Root River should improve the water quality of the river and the fish population there, Duchniak said. Waukesha plans to discharge 7 million gallons of water a day into the Root River.

During the river's low flow periods, that discharge would add about six inches to the river's water depth, which is usually less than a foot during low flow periods. During high flow periods, the impact to the river's depth will be negligible (about one-eighth of an inch). The river's normal depth at high flow periods is about 12 feet.

Waukesha, the largest city in the nation with a radium problem in its drinking water, likely will not be able to get its water in compliance with safe drinking water standards by a court-ordered deadline of 2018. The city will likely need an extension on that deadline, but officials hope the city's application for Great Lakes water is approved and sets the standard for diversions outside of the Great Lakes basin.

"I believe (approval of Waukesha's application) will strengthen the (Great Lakes water) compact and the legal standing of the compact," Duchniak said. "It will prove that (the compact) works and is based on science, and not politics."

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