

Attachment 6

RESPONSE TO QUESTION FROM MR. ROWEN REGARDING THE REGIONAL WATER SUPPLY PLAN (See Item Number 3 under “Further Public Comments” in Meeting Minutes)

As part of the regional water supply plan, four alternatives were developed and considered to address problems and issues relating to water use. Under Alternatives 2 and 3, water from Lake Michigan would be provided to a number of communities that currently rely on groundwater as the source of public water, including two communities that straddle the subcontinental divide. Under Alternative 4, Lake Michigan water would be provided to four additional communities that straddle the divide, and to five communities that are located west of the divide but are located in Waukesha County, which straddles the divide.

Under the terms of the Great Lakes-St. Lawrence River Basin Water Resources Compact, commonly referred to as the Great Lakes Compact, and the provisions of 2007 Wisconsin Act 227, communities lying east of the subcontinental divide may use Lake Michigan water as a source of supply. Communities that straddle the divide may use Lake Michigan water as a public water source provided the spent water is returned to the Lake and certain other provisions of the Great Lakes Compact and Wisconsin Act 227 are met, including establishment of a water conservation program. State-level approval is also required. Communities that are located entirely west of the subcontinental divide, but are located in a County that straddles the divide, may be allowed to divert water from the Great Lakes Basin by the Wisconsin Department of Natural Resources (DNR), provided the spent water is returned to the Lake and certain other provisions of the Great Lakes Compact and Wisconsin Act 227 are met, including approval from all eight States that border the Great Lakes. The DNR is currently developing regulations to implement the provisions of the Great Lakes Compact in Wisconsin.

Under the alternatives developed for the regional water supply plan, the return flow of treated wastewater to Lake Michigan would be provided for all communities converting from groundwater to Lake Michigan water. Three options for return flow for the City of Waukesha were considered pending more detailed environmental assessments. These options were return flow to Underwood Creek, a tributary to the Menomonee River which flows to Lake Michigan; discharge to the Root River, a tributary to Lake Michigan; or discharge directly to Lake Michigan. The option of discharging the return flow to Underwood Creek was the subject of an article in the Milwaukee Journal-Sentinel on March 22, 2009 (article attached). Additional information on the alternatives is provided in a SEWRPC newsletter about

the regional water supply plan distributed in December 2008, which is available from SEWRPC on request. Copies are also available on the SEWRPC website at www.sewrpc.org/watersupplystudy/.

The regional water supply plan does include considerable information on the potential impacts of the return flow on Underwood Creek. That information is considered adequate for regional system-level planning; however, the plan recognizes the need for a more detailed evaluation of the potential environmental impacts associated with the City of Waukesha return flow involving Underwood Creek, the Menomonee River, and the Root River assuming that the return flow is to be discharged to one of those streams. The Regional Water Supply Planning Advisory Committee unanimously recommended that the required more-detailed environmental assessment be made as part of the necessary local level planning and preliminary engineering. As reported in the newspaper article, the Milwaukee Metropolitan Sewerage District and the City of Waukesha are discussing the potential to cooperatively evaluate some of the potential environmental impacts of the return flow on Underwood Creek. In addition, the City of Waukesha Water Utility is conducting local level studies on this issue. The results of the environmental assessment will assist the City of Waukesha in determining which of the potential alternatives to pursue.

Impact study sought on Tosa creek

MMSD, Waukesha consider return path to Lake Michigan

By Don Behm of the Journal Sentinel

Posted: Mar. 22, 2009

 [enlarge photo](#)



Tom Lynn

Underwood Creek in Wauwatosa is a potential route for treated wastewater from Waukesha to flow back to Lake Michigan Waukesha if the city is permitted to use the lake for drinking water.

The Milwaukee Metropolitan Sewerage District has asked Waukesha to pay for a \$40,000 study of the impact of pouring all the city's treated wastewater into a small stream in Wauwatosa.

Discharging to Underwood Creek, a tributary of the Menomonee River, is one of Waukesha's options for returning water to Lake Michigan - if the city receives approval to begin using the lake as a source of drinking water for its residents.

Waukesha Water Utility General Manager Dan Duchniak said he will ask the Common Council this summer to approve an application to the state for permission to withdraw water from the lake. The project might cost the city between \$60 million and \$70 million.

Such a request needs the consent of each of the eight Great Lakes states.

MMSD Executive Director Kevin Shafer said he requested the impact study for two reasons: to determine whether adding Waukesha's treated wastewater flows to Underwood Creek would damage water quality, and the health of fish and other aquatic life; and whether the added volume would erode the stream bed and send soil downstream to the lake.

The study also would specify the location of the discharge pipe along the creek, probably north of W. Blue Mound Road, he said.

The Southeastern Wisconsin Regional Planning Commission has projected Waukesha water use of 9.8 million gallons a day, with 1 million to 2 million gallons more a day for population growth, by 2035, said Bob Biebel, a special projects environmental engineer with the planning commission.

The city has not completed its own estimate of the water volume it will need for growth, Duchniak said. He expects that analysis to be done within one month.

Regardless of the volume included in its request, an equal amount must be returned to the lake to meet requirements of the Great Lakes Compact.

The city might pay as much as \$22 million to build one possible water return route: an 11-mile pipeline from its sewage treatment plant on the Fox River to Underwood Creek, Duchniak said.

A sewerage district contractor is taking out the concrete lining from the creek bed a short distance downstream of the proposed discharge. Old concrete is to be removed over the next three years from Mayfair Road downstream to the Menomonee River, as part of a \$99 million stream rehabilitation and flood control project at the Milwaukee County Grounds.

In the next year, concrete will be removed between Mayfair Road and the Canadian Pacific Railway bridge near U.S. Highway 45. The stream channel in this stretch also will be widened to accommodate the restoration of 7.7 acres of wetland needed to hold floodwater.

The proposed study will estimate daily discharge volumes and assess concentrations of suspended solids, nutrients, fecal coliform bacteria, copper and zinc remaining in the treated wastewater. Shafer will review the proposal Monday at a meeting of the MMSD commission.

On Tuesday, Duchniak will ask the Waukesha Water Utility Commission to approve spending \$40,000 on the study. If it is done, the findings will be included in the city's application for Lake Michigan water.

Duchniak welcomes the study of possible impact of the city's proposed discharge to the stream.

"The last thing we want to do is damage the creek rehabilitation and flood control work being done, and then have to redo their work," Duchniak said.

Biebel, the SEWRPC engineer, said the Waukesha discharge likely would not cause erosion downstream.

"If the discharge is 10 million gallons a day, that is not a significant flow," he said. "That would add just a few inches in depth and not much in velocity."

Shafer is considering the need for a separate study of the impact of Waukesha wastewater flows on downstream flood control projects. A contractor will build a tunnel in the next two years to divert water from Underwood Creek during heavy flooding to a 90-acre basin that has been excavated at the Milwaukee County Grounds. After floodwaters subside, the basin would slowly drain into the Menomonee River.

Biebel said Waukesha could avoid adding to extreme flows in the creek during heavy rain storms, and filling the basin more quickly than planned, by shutting off the discharge. The city could pour its treated wastewater into the Fox River at those times.

Though the Fox River is outside the Great Lakes basin, Waukesha likely could discharge to it several days a year without violating the requirement for returning as much water to Lake Michigan as it withdraws, Biebel said.

Waukesha, in fact, likely would return millions more gallons of water each year than it withdraws, he said.

The reason: groundwater and storm water leaking into the city's sewers.

Waukesha Pipeline



"The city will have up to 15% more wastewater" a day on average than the volume of water purchased from Milwaukee because of the leaks, according to Biebel. This 15% estimate also accounts for the volume lost to lawn watering or washing cars.