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July 25, 2014

Mr. Russ Rasmussen
Water Division Administrator
State of Wisconsin
Department of Natural Resources
101 S. Webster Street
Box 7921
Madison, WI 53707-7921

Re: Great Lakes Diversion Application

Dear Mr. Rasmussen:

Thank you for providing the opportunity to meet with the Department of Natural Resources on May 15th, and also for your follow-up letters dated May 23, 2014 and July 17, 2014. We appreciate your time and attention as the City of Waukesha works through the Great Lakes Water Diversion Application process.

As part of our Application, we thoroughly analyzed four alternatives for the return flow discharge location. Each of the return flow alternatives meets the requirements of the Great Lakes Compact. Providing return flow through the Root River is not the least-cost alternative, but it provides additional environmental benefits, including augmenting low flow during periods that are critical for salmon and trout spawning, increasing aquatic habitat and angling opportunities, improving phosphorus water quality, and increasing egg collection from the DNR's Root River Steelhead Facility. Please see the attached memorandum dated August 16, 2012. In consultation with the DNR, the Application states that the Root River is the preferred return flow location. Lacking any additional specific information to change this selection, the preferred discharge location remains the Root River.

We also analyzed alternatives for managing the return flow and volume. Our goal was to exceed the Compact requirement to return the volume withdrawn, minus an allowance for consumptive use. We also sought to balance the Compact's requirements to minimize out-of-basin water and to maximize Great Lakes water returned to the Great Lakes basin. Our proposed return-flow management plan meets the Compact requirements while also providing at least 100 percent return flow, with no net loss of water to the Great Lakes basin. The City's proposed return flow management plan remains as outlined in the Application. However, if the DNR or regional reviewers decide upon a different alternative, the City will accommodate that modification.



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The City understands the need to comply with NR 217 for the Root River return flow. Like hundreds of other water bodies in the state, the Root River is listed as an impaired river due to in-stream phosphorus levels greater than the water quality standard. Because of the phosphorus impairment, the return flow will provide a new source of water that has phosphorus concentrations less than current concentrations in the river and less than the river standard. Return flow to the Root River will improve water quality in the Root River for phosphorus; it will meet the requirements of NR 217.13(8)(b); and it is consistent with the EPA position that the discharge should result in a decrease in phosphorus concentration in the receiving water, which was stated in an enclosure to a July 25, 2012 EPA letter to Cathy Stepp approving NR 217. The City is also evaluating treatment performance options to meet its June 2015 permit deadline. Waukesha's return flow water quality will meet all state and federal permit limits and the City is committed to providing return flow that improves the Root River water quality.

We thank the DNR for its dedicated and in-depth review of our proposal to provide safe and sustainable drinking water to our customers and for ensuring the terms of the Compact are met. We look forward to continuing our discussions as the DNR finalizes the Application's technical review.

If you would like to discuss this item or any other aspects of the application, feel free to contact Daniel Duchniak at 262-521-5272 (ext. 518).

Sincerely,



Shawn N. Reilly
Mayor

Enclosure

CORRESPONDENCE/MEMORANDUM

DATE: August 16, 2012

FILE REF: 3600

TO: Eric Ebersberger

FROM: Brad Eggold

SUBJECT: Water return to Root River from Waukesha

The Root River does provide a significant fishing opportunity for thousands of anglers in the densely populated area of southeast Wisconsin. In the spring there are spawning runs of steelhead (Chambers Creek and Ganaraska strain rainbow trout) from Lake Michigan and in the fall there are spawning runs of coho salmon, Chinook salmon, steelhead (Skamania strain rainbow trout) and brown trout. Because of these strong spawning runs observed in the Root River, the department, in 1994, constructed a facility to collect eggs for our hatcheries named the Root River Steelhead Facility. Eggs are collected from these spawning fish so that we can rear the correct number for stocking in subsequent years. These young fish are subsequently stocked back into Wisconsin's Lake Michigan Harbors and tributaries. In addition, this facility was constructed to enable us to regularly monitor the salmon and trout entering the Root River and collected in the facility. In peak years, we have experienced runs of over 10,000 salmonids providing angling opportunities which at times exceeded 100,000 angling hours. In addition, movements of these fish in the lake provide many thousands of angling hours for both sport and charter boats fishing off-shore near Racine.

Because the upper reaches of the Root River lie in heavily urbanized areas, the upstream hydrology has been significantly altered by development and stormwater sewer construction. This has had an impact on the total stream flow to the extent that in dry years, particularly during the fall, the average stream flows in Racine can drop below 10 cubic feet per second. These low flows have a very negative impact on the fishery. Understandably, this also results in a significant decrease in the department's ability to collect adequate supplies of eggs for our hatcheries. Further, the angling opportunities are greatly diminished downstream of the Horlick Dam. In short, no water means few fish, inadequate or hard to obtain egg collection and a decreased number of anglers. As a result we believe that increasing the total stream flow by about 15 cfs (the average return flow from Waukesha) would be beneficial to our fisheries program goals for the Root River and for Lake Michigan. Not only would increased flows have a positive impact on the number of fish entering the river and thus into our facility, it is also likely that the angling experiences would be expanded because with more water, there could be more places to fish below the Horlick Dam. Further, with higher flows, fish may enter the river earlier and stay in the river for longer periods thereby extending the angling "season" for these anadromous fish.

At our Strawberry Creek Weir facility in Door County, we have constructed a water pipeline to take water from the Sturgeon Bay ship canal and pump it to the water right above that weir. This has increased the water flow into Strawberry Creek and has allowed us to collect sufficient Chinook salmon eggs for our production needs. We have considered this method to augment flow in the Root River, however the department would incur significant construction and ongoing energy costs to pump water from the Lake to augment the total stream flow in the river. The future discharge of the highly treated wastewater from Waukesha could provide a flow augmentation solution without any new investments needed at our facility.