



July 13, 2016

Mr. Fred Abadi  
Director, Department of Public Works  
City of Waukesha  
130 Delafield St.  
Waukesha, WI 53188

**SUBJECT:** Facility planning limits request for proposed surface water discharge in the Great Lakes – St. Lawrence River Basin

Dear Mr. Abadi:

For the purposes of the City of Waukesha's facility planning at the wastewater treatment plant, the Department asks that the City of Waukesha formally request an evaluation of appropriate effluent limitations for a return flow discharge of treated wastewater to the chosen return location in the Great Lakes basin based on the recent approval for a diversion of Great Lakes water by the Great Lakes-St. Lawrence River Basin Water Resources Council (Compact Council).

The Compact Council recently approved the City of Waukesha's Application for a Diversion of Lake Michigan water with Return Flow to the Root River. The Compact Council decision conditioned the diversion approval to 8.2 million gallons per day (MGD) as an annual average day demand. The decision also states approximately 100% of the previous year's average annual withdrawal must be returned to the Lake Michigan basin.

The Applicant has proposed a wastewater effluent discharge location on the Root River near 60<sup>th</sup> Street and Oakwood Avenue in the City of Franklin. Updated low flow estimates for the Root River were generated and provided by USGS for this location in December 2014. For the Technical Review, the Department calculated draft effluent limits for the proposed surface water discharge to the Root River using the Applicant's proposed return flow volume of 10.1 MGD.

Since the approved return flow rate is less than previously proposed, the Department intends to recalculate appropriate effluent limitations for a discharge of 8.2 MGD to the Root River. Please verify the inputs that are relative to the calculation of effluent limits for the chosen return flow scenario. A formal request for planning limits related to the proposed new discharge in the Great Lakes basin should include:

- Specific return flow discharge location
- Return flow rate, in terms of maximum anticipated annual average flow (using 8.2 MGD would be sufficient).
- Preliminary engineering plans for the outfall structure, including potential diffuser design. These details will be needed if higher than 25 % mixing is being requested in limit calculations.

Once the City of Waukesha submits this request and supporting information, the Department will provide the effluent limits planning memo to the City of Waukesha as soon as possible.

If you have any questions in regards to this letter, please contact me by phone at (414) 263-8623, or by email at [nicholas.lent@wisconsin.gov](mailto:nicholas.lent@wisconsin.gov).

Sincerely,

*Nick Lent*

Nick Lent

Wastewater Engineer – Effluent Limit Calculator

Wisconsin Department of Natural Resources

2300 N Dr. Martin Luther King Jr. Dr.

Milwaukee, WI, 53212

Cc (email only):

Dan Duchniak, Manager, City of Waukesha Water Utility (email only)

Jeff Harena, Superintendent, City of Waukesha Wastewater Treatment Plant (email

Timothy Thompson, Compliance Staff, Wisconsin DNR

Laura Dietrich, Southeast Region Permit Coordinator, Wisconsin DNR