

ATTACHMENT C

WDNR WPDES Effluent Limitations Letter Dated October 16, 2008



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

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October 16, 2008

Mr. Daniel Duchniak, General Manager
Waukesha Water Utility
115 Delafield St.
Waukesha, WI 53188-3615

Subject: WPDES Effluent Limitations

Dear Mr. Duchniak:

The purpose of this letter is to provide a written response to your letter of April 7, 2008. You requested effluent limitations for a potential discharge from the City of Waukesha wastewater treatment plant (WWTP) to three Lake Michigan tributaries – Underwood Creek, Menomonee River and Root River. A meeting held on July 28, 2008 provided us all an opportunity to discuss your request and clarify any associated issues. My response at this time will be somewhat brief, reflect the phone messages I left on September 23 and, I hope, provide additional direction to the City for preparing a wastewater facility plan under the provisions of NR 110, Wis. Adm. Code.

Simultaneously, you are receiving a letter from Eric Ebersberger describing the content of a potential application for diversion of Great Lakes water. That letter contains an outline of our current expectations for the content of an application for diversion, including elements relating to return flow from a system that withdraws water from the Great Lakes basin. So as not to be redundant, my letter is limited to information relating to the quality of the discharge of the return flow and Eric's letter contains directions for the manner in which other potential effects of the discharge must be evaluated. It is our expectation that the wastewater facility plan for the project (prepared under NR 110) and the portion of the application relating to return flows will be submitted as one and contain an analysis of impacts of the wastewater flows in the tributaries on river stage, flood flows and storage and associated impacts. Similarly, an assessment of the effects associated with the diversion of the wastewater discharge out of the Fox River must be included. Finally, it must also, as identified in Eric's accompanying letter, demonstrate that the amount of return flow is equal to that withdrawn as described in the "Great Lakes Compact" legislation.

A significant factor in our evaluation is the current level of treatment provided for conventional pollutants by the Waukesha WWTP. Typically, effluent BOD and suspended solids are measured and reported at 2 mg/L or less. Ammonia nitrogen is less than 1 mg/L nearly all the time, phosphorus is usually less than 20% of the 1 mg/L permit limit and effluent DO exceeds the 7 mg/L minimum permit limit. Regardless of discharge location, it is expected that this level of treatment will continue to be provided and a permit to discharge to Lake Michigan tributaries will be at least as stringent as existing effluent quality.

Water Quality Standards – Each of the proposed discharge sites is located on a stream classified as a fish and aquatic life water. Although Underwood Creek currently contains a dissolved oxygen variance (see NR 104.06(2), Wis. Adm. Code), the Department believes the 5 mg/L dissolved oxygen standard for fish and aquatic life should be the criterion used to establish effluent limitations for that discharge location.

Of the three waterbodies, portions of the Menomonee River and Root River are listed by the Department as "impaired" under section 303(d) of the Clean Water Act. Listed pollutants include bacteria, phosphorus, sediments and PCBs. Underwood Creek is not listed specifically, although it has characteristics similar to other waters in the area that are listed as "impaired". If and when a Total Maximum Daily Load (TMDL) is established for any impaired waterbody, the limits provided below may change.

Antidegradation – Wisconsin's antidegradation policy states that "no waters of the state shall be lowered in quality unless it has been affirmatively demonstrated to the department that such a change is justified as a result of necessary economic and social development..." (NR 102.05(1), Wis. Adm. Code). This policy is implemented through NR 207 for WPDES permitted discharges. The unique character of this proposed discharge does not, in many respects, conform to the provisions and decision parameters contained in the NR 207 rule. For example, a discharge to the Lake Michigan tributaries is not a "new discharge" or an "increased discharge" under the definitions of the rule. Therefore, a reasonable analysis of this proposal using the specific provisions of the rule simply does not fit the circumstance.

However, we believe it is important and significant that any discharge such as that proposed here, abide by the basic principles of the antidegradation policy. That is, there should be no lowering of water quality unless allowed and appropriately justified and then only if the uses in the receiving water are maintained.

Within your application for a discharge of return flow to Lake Michigan tributaries, the Department will seek to assure that the specific provisions of NR 207.04(2)(a) are maintained. This rule paragraph states that effluent limitations for an existing discharge will remain unchanged if the treatment facility can meet those existing limitations. Therefore, irrespective of any other calculations of limits we could produce, you must maintain existing effluent quality and permit limitations to meet these requirements will be proposed for any WPDES permit application to discharge to the Lake Michigan tributaries.

At this time, we have undertaken a specific evaluation only for a proposed discharge to Underwood Creek. As you have proposed, this stream has the lowest flow condition and, therefore, produces the most stringent effluent limitations. Effluent limitations for a discharge to the Root River would be nearly identical to those for an Underwood Creek discharge because low flow values are similar. Limitations for a discharge directly to the Menomonee River may be less stringent, but only minimally so. As you will see, the aforementioned maintenance of existing effluent quality to meet the antidegradation policy will essentially drive the proposed effluent limitations for any discharge.

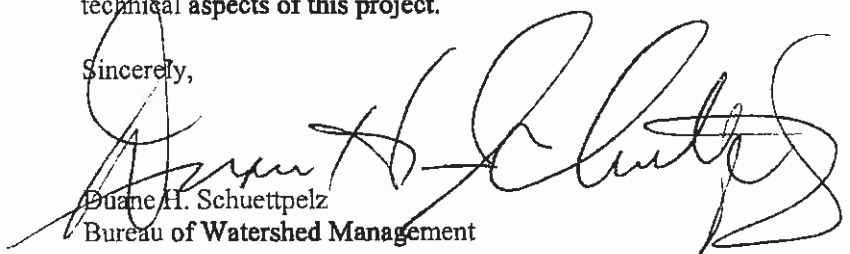
In summary, proposed effluent limitations are similar to those in the existing WPDES permit, including the following:

- Limitations for BOD and suspended solids will be in the range of 5 to 10 mg/L, with a minimum effluent DO value of 7 mg/L;
- Limitations for phosphorus are 1 mg/L, except at they may change with new rules currently under development;
- Limitations for ammonia nitrogen will be driven by existing effluent quality and would likely be more stringent than those in the current permit;
- Limitations for mercury will remain as in the current permit (alternative limitations under NR 106.145);
- Limitations for other bioaccumulating chemicals of concern will not apply because they have not been detected;
- Limitations for chloride (alternative limitations under NR 106, Subch. VII) and associated source reduction requirements will continue;
- Disinfection, as currently applied, must continue.

Given this information, we believe the appropriate scope of the wastewater facilities plan should be limited to that associated with the infrastructure necessary to return flow to the Lake Michigan basin. As noted in prior communications, the facilities planning rule requires you to evaluate the alternative of connecting wastewater discharges to other nearby systems, including the Milwaukee Metropolitan Sewerage District. Such evaluation must include an assessment of the cost-effectiveness of a connection as described in NR 110, Wis. Adm. Code. Lastly, the facilities plan must conform to any Water Quality Management Plan adopted by the Southeastern Wisconsin Regional Planning Commission.

I am hopeful that this reply and our earlier communication provide sufficient information to allow you to proceed with facilities planning for this project. If you wish to meet with us to discuss this matter further or have questions, please contact me. Feel free, also, to maintain other contacts with Department staff to discuss various technical aspects of this project.

Sincerely,



Duane H. Schuett
Bureau of Watershed Management

Cc: Todd Ambs – AD/8
Pat Henderson – AD/8
Russ Rasmussen – WT/3
Bruce Baker – AD/8
Jill Jonas – DG/5
James McNelly – SER, Milwaukee
Eric Ebersberger – DG/5
Michael Hahn – SEWRPC