STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES

NOTICE OF FINAL DETERMINATION TO REISSUE

A WISCONSIN POLLUTANT DISCHARGE ELIMINATION SYSTEM (WPDES) PERMIT No. WI-0022926-09-0

Permittee: Burlington Water Pollution Control, City Hall 300 N. Pine St, Burlington, WI, 53105

Facility Where Discharge Occurs: Burlington Water Pollution Control, 2100 S. Pine Street

Receiving Water And Location: Fox (IL) River in Racine County

Brief Facility Description: The City of Burlington operates a 3.50 MGD two-stage biological wastewater treatment facility, which went on line in 1992. The plant's organic capacity is 11,350 lb/day. Treatment processes include mechanical screening, grit removal (a new grit washer was installed in April 2006), primary clarification, biological treatment using attached growth media in two biotowers, intermediate clarification, activated sludge aeration for ammonia removal, final clarification, disinfection by ultraviolet light and phosphorus removal with ferrous chloride. Treated effluent is discharged into the Fox River in Racine County. Sludge produced during treatment processes is anaerobically digested, thickened in a gravity belt thickener and stored on-site in two sludge storage tanks of total capacity 3.1 million gallons. Sludge hauling and injection is subcontracted to the City of Burlington. Facility improvements were completed in February 2014. The improvements include rehabilitation of primary and intermediate clarifiers, replacement of pumping equipment, biofilter equipment and media and aeration basin diffusers. Burlington is in substantial compliance with the conditions of its current WPDES permit.

Permit Drafter's Name, Address and Phone: Laura Dietrich, 2300 N Dr Martin Luther King Jr Dr, , Milwaukee, WI, 53212-0436, (414) 263-8651

Basin Engineer's Name, Address, and Phone: Timothy Thompson, 2300 N Dr Martin Luther King Jr Dr, , Milwaukee, WI 53212, (414) 263-8525

Date Permit Signed/Issued: **Enter Date Permit Signed/Issued**
Date of Effectiveness: **Enter Permit Effective Date**
Date of Expiration: **Enter Permit Expiration Date**

Following the public notice period the Department has made a final determination to reissue the WPDES permit for the above-named permittee for this existing discharge. The permit application information from the WPDES permit file, comments received on the proposed permit and applicable Wis. Adm. Codes were used as a basis for this final determination.

The Department has the authority to issue, modify, suspend, or revoke WPDES permits and to establish effluent limitations and permit conditions under ch. 283, Stats.

Following is a summary of significant comments and any significant changes which have been made in the terms and conditions set forth in the draft permit:

<u>Comments Received from the Applicant, Individuals or Groups and Any Permit Changes as Applicable</u>
#1 Nitrogen, Ammonia: The City requests that a table be provided instead of the listed daily maximum value. This would allow compliance to be based on effluent pH and effluent ammonia rather than on a statistically determined pH value.
WDNR Response: The Department does not take issue with the idea of a table for ammonia maximum limits. We would normally include this in a WQBEL memo when the effluent pH is highly variable AND if there are instances where they might bump up against the limit based on past data. A copy of the table we'd normally use for discharges to warmwater streams is included in the proposed re-noticed permit.

#2 Nitrogen, Ammonia: The City requests that the limit for October be based on using 50 percent of the 7Q10, as provided in NR 106.32(3)(c)3 for temperatures between 11 degrees C and 16 degrees C which would be the expected temperatures for the Fox River at Burlington in October. The City requests that the proposed monthly limit for October be recalculated using 50% of the 7Q10 as provided for in the Wisconsin Administrative Code. Based on a review of NR 105, the criteria for October at a pH of 8 and a temperature of 10 degrees C should be 3.26 not 2.43.
WDNR Response: Regarding the background temperature for ammonia calculations, the comment was correct in referring to the use of 50% of streamflow when background temperatures are between 11 and 16 degrees C. However, the default background we use for October is 50 degrees F which equals 10 degrees C, so that falls outside of the range for 50% mixing zone flow. If Burlington does background temperature monitoring during October, we can look at this on a site-specific basis and modify the ammonia limit, but based on the default they don't qualify for 50%. That is what is given get based on the default temperature in Table 2 of NR 102 and the ammonia implementation language in NR 106.32(3)(c)3. In fact, actually we would expect site-specific temperatures to be

LOWER than 50F or 10C since the default in NR 102 is actually a conservative high value used in calculating thermal limits, but the permittee is free to collect additional data as needed.
Alternatively, Burlington has the freedom to contact USGS for the estimation of monthly background low flows to modify the 44 cfs used to calculate the limits. We don't currently have low flows at Burlington, but we do have them nearby upstream at Rochester. The Rochester data suggests there's a decent-sized difference between October 7Q10 there and the year-round 7Q10 (same goes for 7Q2 which is actually the basis for the October criterion of 2.43 mg/L mentioned in my WQBEL memo).
This doesn't mean the October limit is 2.43 mg/L. In fact, the calculated limit for October was 13 mg/L monthly average. If the October 7Q2 was higher than 82 cfs, the limit could be relaxed. One of the things that could be used by the permittee to determine the need for this extra work (as the permittee would be expected to pay for the USGS re-calculation) is whether or not there's a concern over the ability to meet a 13 mg/L monthly limit in October. Since 2008, there has not been an effluent ammonia result reported above 1 mg/L in October.

#3 Phosphorus: The City objects to the inclusion of a mass limit in this permit. There is no need for a mass limit if the discharge meets the applicable water quality criteria since water quality is protected regardless of the mass discharged to the Fox River.
WDNR Response: Regarding the mass limit for phosphorus, a mass limit is required pursuant to s. NR 217.14(3). According to that section of the code, since the lowest limit is less than 0.30 mg/L, the mass limit is expressed as an annual average.

#4 Phosphorus: The compliance schedule requires submittal of plans and specifications six years from the effective date of the permit. This goes beyond the expiration date of this permit, which is five years from issuance. This compliance date will be in effect unless Burlington chooses an option that does not include the construction of facilities, or the Wisconsin DNR reissues, modifies or revokes the permit prior to the date. This leaves the possibility for design and construction deadlines to exist outside the 5-year life of this permit. We are concerned that, dependent on the Department's future action or inaction in regards to permit reissuance, these requirements could be enforced without a current discharge permit, or the opportunity for future comment.
WDNR Response: The Department will prioritize reissuances, revocations and modifications of permits to allow permittees the opportunity to implement adaptive management or nutrient trading in a timely and effective manner. Additionally, any delay in permit reissuance will be taken into consideration when enforcing the compliance schedule due date.

#5 Water Quality-Based Effluent Limits (WQBELs) for Total Phosphorus: The City requests that all dates after the progress report on plans and specifications be deleted from this permit. At this time the selected alternative may not include construction of facilities, yet these dates are effective unless the Wisconsin DNR reissues, revokes and modifies this permit prior to the scheduled date in the permit.
WDNR Response: The Compliance Schedule for Total Phosphorus included in the permit is mandated by the US EPA. NR 217.17 provides criteria for compliance schedules. The permittee is allowed 3 years following permit reissuance to decide on an option to meet the phosphorus WQBEL by submitting a report on final compliance alternatives plan. Where significant upgrades are needed, the 9 years included in the draft permit, is the maximum allowed in accordance with NR 217.17(2).The Department does not believe the dates after the progress report on plans and specifications should be deleted. The Department may consider requests for due dates' extension at the appropriate time if necessary.

<u>Comments Received from EPA or Other Government Agencies and Any Permit Changes as Applicable</u>
No comments received.

As provided by s. 283.63, Stats., and ch. 203, Wis. Adm. Code, persons desiring further adjudicative review of this final determination may request a public adjudicatory hearing. A request shall be made by filing a verified petition for review with the Secretary of the Department of Natural Resources within 60 days of the date the permit was signed (see permit signature date above). Further information regarding the conduct and nature of public adjudicatory hearings may be obtained by contacting the Department of Natural Resources, Bureau of Watershed Management, WPDES Permits, Box 7921, Madison, Wisconsin 53707 and by review of ch. NR 203, Wis. Adm. Code, s. 283.63 Stats., and applicable code law.

Information on file for this permit action may be inspected and copied at either the above named permit drafter's address or the above named basin engineer's address, Monday through Friday (except holidays), between 9:00 a.m. and 3:30 p.m. Information on this permit action may also be obtained by calling the permit drafter at (414) 263-8651 or by writing to the Department. Reasonable costs (usually 20 cents per page) will be charged for copies of information in the file other than the public notice and fact sheet. Pursuant to the Americans with Disabilities Act, reasonable accommodation, including the provision of informational material in an alternative format, will be made to qualified individuals upon request.