DNR Response to public notice comments received on September 12, 2014 by The City of Burlington.

1. 3.2.1 Sampling Point (Outfall) 001 – EFFLUENT

   a. 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.
   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. Here's a copy of the table we'd normally use for discharges to warmwater streams.

Effluent pH - s.u.	**NH_3-N Limit – mg/L**	**Effluent pH - s.u.**	**NH_3-N Limit – mg/L**
pH ≤ 7.5	No Limit	8.2 < pH ≤ 8.3	9.4
7.5 < pH ≤ 7.6	34*	8.3 < pH ≤ 8.4	7.8
7.6 < pH ≤ 7.7	29*	8.4 < pH ≤ 8.5	6.4
7.7 < pH ≤ 7.8	24*	8.5 < pH ≤ 8.6	5.3
7.8 < pH ≤ 7.9	20*	8.6 < pH ≤ 8.7	4.4
7.9 < pH ≤ 8.0	17	8.7 < pH ≤ 8.8	3.7
8.0 < pH ≤ 8.1	14	8.8 < pH ≤ 8.9	3.1
8.1 < pH ≤ 8.2	11	8.9 < pH ≤ 9.0	2.6

** * During the months of May through October if the pH is less than or equal to 7.9 there is no daily maximum limit for NH_3-N. Limits shown in the table above with an asterisk* apply from November through April only.*

   b. 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.

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).

	7Q10	*7Q2*
USGS low flow estimates at Rochester)		
Year-round	*39 cfs*	*58 cfs*
October	*47 cfs*	*83 cfs*
USGS low flow estimates at Burlington)		
Year-round	*44 cfs*	*82 cfs*

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.

2. 3.2.1.3 Phosphorus Water Quality-Based Effluent Limitation(s)

    a. 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.
    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.

    b. 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.
    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.

3. 5.2 Water Quality-Based Effluent Limits (WQBELs) for Total Phosphorus
    a. 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.
    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.