

STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES

NOTICE OF FINAL DETERMINATION TO REISSUE A WISCONSIN POLLUTANT DISCHARGE ELIMINATION SYSTEM (WPDES) PERMIT No. WI-0029971-09-0

Permittee: City of Waukesha, 600 Sentry Dr, Waukesha, WI, 53186

Facility Where Discharge Occurs: City of Waukesha Clean Water Plant, 600 Sentry Drive, Waukesha, WI 53186

Receiving Water and Location: Fox (IL) River in Waukesha County and Root River in Milwaukee County

Brief Facility Description: The City of Waukesha Clean Water Plant (CWP) operates a 14 MGD extended aeration activated sludge wastewater treatment facility (WWTF). The WWTF provides service to an estimated population of 73,000 people, as well as 18 categorical and 6 significant industrial users. The backup power supply, digestion, solids dewatering, re-aeration, and disinfection treatment processes have recently been upgraded at the WWTF, and a phosphorus treatment capacity upgrade will occur in the next three years. Wastewater treatment processes currently include screening and grit removal, influent pumping, primary clarification, primary effluent pumping, activated sludge, chemical phosphorus removal with coagulation, secondary clarification and tertiary filtration, ultraviolet light disinfection, and post aeration. Biosolids treatment processes include waste activated sludge (WAS) thickening by dissolved air flotation, anaerobic digestion of primary solids and WAS, liquid sludge storage, centrifuge dewatering, and dewatered biosolids cake storage.

As a condition of the 2016 S. Lawrence-Great Lakes River Water Resources Compact approval, Waukesha must return to the Root River, a daily quantity of treated wastewater equivalent to or in excess of the previous calendar year's average daily diversion. On any days when the total quantity of treated wastewater is insufficient to meet this target, all treated wastewater must be returned to the Root River. The selected return flow discharge location is the Root River near Franklin, WI. Due to the transition of the water supply from groundwater to Lake Michigan being complete within the next five years, the proposed WPDES permit includes requirements for the required return flow discharge to the Great Lakes Basin. The return flow discharge is referred to as Outfall 006. The proposed permit regulates the effluent discharged to the Root River but is not a permit for the construction or location of the proposed return flow pipe line.

Permit Drafter's Name, Address and Phone: Laura Dietrich, 141 NW Barstow St, Room 180, , Waukesha, WI, 53188, (262) 574-2159

Basin Engineer's Name, Address, and Phone: Nicholas Lent, 2300 N Dr Martin Luther King Jr Dr, , Milwaukee, WI 53212, (414) 263-8623

Date Permit Signed/Issued: December 30, 2019

Date of Effectiveness: January 01, 2020

Date of Expiration: December 31, 2024

Public Informational Hearing Held On: Hearing held on Thursday October 17, 2019

Following the public informational hearing the Department has made a final determination to reissue the WPDES permit for the above-named permittee for this 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, revoke and reissue or terminate 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:

Comments Received from the Public (Note: comments of similar substance were combined/summarized below for the reader's efficiency)

1. **Chloride Discharge:** general concern and opposition over the changes to the chloride levels in the Root and Fox (IL) Rivers. No increase of chloride should be permitted, and the variance should not be allowed.

**WDNR Response to Comment #1:** The City reapplied for a chloride variance to the Fox (IL) River discharge location in accordance with s. 283.15, Wis. Stats., and meets the requirements, therefore the conditions and requirements of the variance were included in the draft permit. The draft permit does not include a chloride variance

to the Root River. Rather, it includes a compliance schedule for the City to meet the chloride water quality standard as soon as possible. *No changes were made to the proposed permit based on this comment.*

Comments Received from Julie Kinzelman, City of Racine Public Health Department

- 2. Fecal Coliforms and Bacteria:** Permit should reflect an E. coli standard in keeping with proposed rulemaking and best available science regarding lack of specificity with respect to health effects associated with fecal coliforms. E. coli is a better indicator and provides uniformity with respect to assessing discharger and receiving water body health. Microbiological quality of the Root River is determined using an E. coli standard due to its direct influence on Lake Michigan recreational water quality (i.e. it discharges immediately adjacent to North Beach). The discharger should be required to submit E. coli values, not fecal coliforms, to provide continuity and comply with proposed WDNR rule changes.

**WDNR Response to Comment #2:** The department has authority to impose discharge limits for pollutants that have codified water quality standards or discharge limitation guidelines promulgated by rule. Since the E. coli standard is still a proposed rule and has not yet been promulgated, the permit does not include the proposed E. coli requirements. Any rules promulgated after permit reissuance may be incorporated at the next permit reissuance or as described in any future department policy for implementation of a new rule. *No changes were made to the proposed permit based on this comment.*

- 3. Antidegradation Evaluation:** The fact that there is acknowledgement of a decrease in Root River water quality across multiple parameters by the department will be of concern to some as a 20% cost upcharge over 20 years, for instance, will not be an appropriate justification for environmental degradation.

**WDNR Response to Comment #3:** A new discharge may be permitted by the department if the permittee demonstrates to the department that such a change is justified as a result of necessary economic and social development, provided that no new discharge interferes with or becomes injurious to any assigned uses made of or presently possible in such waters. The decrease in water quality is protective of water quality criteria and is necessary. The department has found that the proposed limitations are consistent with both. The threshold of 110% capital costs or 115% total present worth value between alternatives is provided in s. NR 207.04(1)(d)2.b., Wis. Adm. Code. The department must make an antidegradation decision based on that threshold. The department has updated the earlier cost evaluation to ensure consistency in the evaluation between alternatives. *No changes were made to the proposed permit based on this comment.*

Comments Received from Nancy Gloe, Waukesha County Environmental Action League

- 4. Ammonia:** According to the draft permit the limits were calculated based on NR 105 standards which was last revised in 2004. These standards will not be protective of sensitive aquatic life (fresh water mussels) in the Root River. DNR needs to upgrade the ammonia standards to protect all aquatic life, per EPA's revised 2013 standards.

**WDNR Response to Comment #4:** The department has authority to impose discharge limits for pollutants that have codified water quality standards or discharge limitation guidelines promulgated by rule. Since the State has not yet promulgated the revised 2013 EPA standards, the department did not evaluate ammonia based on those standards. Any rules promulgated after permit reissuance may be incorporated at the next permit reissuance or as described in any future department policy for implementation of the new rule. *No changes were made to the proposed permit based on this comment.*

Comments Received from Midwest Environmental Advocates on behalf of the Compact Implementation Coalition and several partner organizations including; Milwaukee Riverkeeper, League of Women Voters of Wisconsin, Wisconsin Wildlife Federation, River Alliance of Wisconsin, Sierra Club Wisconsin, Waukesha County Environmental Action League, and Alliance for the Great Lakes.

- 5. Antidegradation Review:** DNR's antidegradation review of Waukesha's proposed discharge to the Root River is inadequate because the analyses of cost-effective discharge location alternatives and cost-effective alternatives that can prevent a significant lowering of water quality are both based on outdated, incomplete, and irrelevant information.

**WDNR Response to Comment #5:** The department has recalculated the costs for alternatives involving a direct discharge based on the approved flow and brought those to May 2018 dollars using appropriate price indices; these are included in the updated antidegradation memo. Much of the sizing used to develop the costs for an average diversion flow rate of 10.1 MGD is the same as will serve at a diversion flow rate of 8.2 MGD. This is because equipment and pipe are available in fixed sizes and because the return flow pipeline and lift station are specified primarily based on necessary peak flow rate, rather than average flow rate. Based on the updated evaluation, the department finds that alternative discharge options are not cost-effective according to the threshold in s. [NR 207.04\(1\)\(d\)2.b.](#), Wis. Adm. Code.

The department used monitoring data from the Root River where there was adequate data for a given parameter. Where there was insufficient data to reasonably characterize the existing water quality in the Root River, the department used data from similar watersheds. This is the department's practice for determining discharge limitations throughout the state. The antidegradation evaluation included a larger suite of parameters than required under s. [NR 207.05\(1\)](#), Wis. Adm. Code. The department reviewed additional stream water quality data received during the comment period as a part of its final determination. Relevant parameters in that dataset included dissolved oxygen, biochemical oxygen demand, temperature, pH, ammonia nitrogen, total phosphorus, and total suspended solids. *Updates were made to the antidegradation evaluation document however, no changes were required in the proposed permit based on these updates.*

- 6. Chloride:** Any schedule must require compliance with the effluent limitation "as soon as possible" and may not extend beyond the five years from the date the permit is reissued or modified. DNR failed to establish that the proposed schedule requires compliance with the final effluent limit "as soon as possible." There is incomplete information explaining how DNR determined the length of Waukesha's compliance schedule. The antidegradation memorandum, WQBEL memorandum, and the Final Chloride Report address the interim limits and the likelihood they will result in significant lowering of water quality in the short term.

**WDNR Response to Comment #6:** The City of Waukesha has already begun implementation of a very aggressive water softener optimization effort. As explained in the 2017 Final Chloride Report this effort will take place in two phases. The first phase is currently underway, and the second phase will begin once the switch over to the Lake Michigan water supply has occurred. The challenges, efforts, and time required to complete this work is outlined in Final Chloride Report. Based on the information provided and similar efforts undertaken in other communities, the department believes the 3-year time frame requires compliance as soon as possible with the final limit of 400 mg/L and is reasonable and appropriate. Furthermore, the interim chloride limits were included in the proposed permit as a back stop to ensure that the City does not discharge at concentrations greater than what are currently achievable prior to the final limit becoming effective. *No changes were made to the proposed permit based on this comment.*

- 7. Thermal Pollution:** The department has not provided adequate supporting documentation justifying its conclusions that no thermal treatment technology can cost-effectively prevent such a significant lowering of water quality and that dissipative cooling will adequately prevent adverse impacts to aquatic life. There is simply a lack of information to adequately address whether dissipative cooling will have the desired effect.

**WDNR Response to Comment #7:** Since the proposed discharge can meet the water quality thermal criteria without additional treatment when dissipative cooling is considered, any alternative is more expensive than the existing treatment. Therefore any cooling treatment alternative is not cost-effective as prescribed in s. [NR 207.04\(1\)\(d\)2.b.](#), Wis. Adm. Code. The department considered the order of magnitude of costs for thermal chillers because they can reliably lower water temperatures even when the wet bulb temperature is higher than the water temperature, which frequently occurs in October. The data used for the analysis was obtained for other purposes but applied to the proposed discharge. The department is unaware of other technologies that can cool water lower than the wet bulb temperature. *No changes were made to the proposed permit based on this comment.*

- 8. Phosphorus:** DNR has not established that the proposed discharge of phosphorus will improve water quality. DNR's comparison of marginal improvements in water quality to costs associated with a more stringent effluent limit is inappropriate and has failed to establish that 0.060 mg/L is far enough below 0.075 mg/L to provide an adequate margin of safety. The lack of more robust site-specific data strongly suggests that DNR should recommend a lower effluent limit for phosphorus that will provide an adequate margin of safety.

**WDNR Response to Comment #8:** The analysis provided in Appendix G of the August 2018 facility plan amendment; Assessment of Root River Water Quality Improvements with Return Flow – Draft (3-200 D5). In 3-200 D5, the City analyzed expected changes to water quality in the Root River as a result of ten different scenarios as summarized in Table 1-1 of that document. These scenarios covered the existing flow rate of approximately 6 MGD, up to the maximum anticipated discharge of 9 MGD, and potential effluent limitations that were in discussion at that time ranging from 0.044 mg/L up to 0.075 mg/L. Page 9 of that document states that the incremental cost of the extra water quality gains that would occur from the lowest proposed effluent limit of 0.044 mg/L would be 8 to 9 times higher than that which would be observed with the 0.06 mg/L middle ground concentration. In addition to that analysis the department ran a *Weighted Regressions on Time, Discharge and Seasons* model to predict the change in phosphorus concentrations at Johnson Park near Racine (Diebel 2018). At an average daily discharge of 5.8 MGD (equivalent to the Applicant’s average withdrawal in 2017), with a wastewater TP concentration of 0.06 mg/L, the model predicted that TP concentrations in the Root River during the growing season (May-October) would be reduced from a median of 0.126 mg/L to 0.103 mg/L. At a discharge of 9.3 MGD, at build-out, the model predicted that median TP concentrations during the growing season would be further reduced to 0.096 mg/L. In conclusion, the City has provided a sufficient analysis that a limit of 0.060 mg/L will result in a water quality improvement per s. NR 217.13(8)(b), Wis. Adm. Code. *No changes were made to the proposed permit based on this comment.*

- 9. Evaluation of Return Flow Discharge Location:** DNR has failed to evaluate whether return flow via the Root River is as close as practicable to the place where the water will be withdrawn. Before granting Waukesha a WPDES permit for the proposed discharge, DNR must evaluate whether sending return flow to Lake Michigan via the Root River is as close as practicable to Milwaukee’s water intake pipes.

**WDNR Response to Comment #9:** Under the proposed WPDES wastewater permit, the department’s authority is limited to the regulation of the quality of the water from the discharge, not the location in proximity to the water supply intake. *No changes were made to the proposed permit based on this comment.*

- 10. Contaminates of Emerging Concern:** DNR should include conditions in the final WPDES permit related to contaminants of emerging concern, including a recycling program for pharmaceutical and personal care products.

**WDNR Response to Comment #10:** These requirements are outside of the authority granted under ch. 283, Wis Stats. The DNR has the authority to impose discharge limits for pollutants that have codified water quality standards or discharge limitation guidelines promulgated by rule. Any future criteria developed and promulgated for emerging contaminants may be incorporated in future permit reissuances. *No changes were made to the proposed permit based on this comment.*

- 11. Additional Public Hearing:** DNR should hold an additional public hearing on the WPDES permit in communities downstream of the proposed discharge. The timing and location of the hearing deprived impacted communities of reasonable access to the hearing and the opportunity to voice their concerns.

**WDNR Response to Comment #11:** The public informational hearing was held in accordance with the public participation requirements for water quality standards variances pursuant to s. 283.15, Wis. Stats., 40 C.F.R. s. 131.20, and ch. NR 203, Wis. Adm. Code. Because the proposed WPDES permit includes a chloride variance for the Fox (IL) River the department decided to hold the hearing in a location and at a time that was reasonably accessible to those affected by the chloride variance while still being reasonably accessible to those affected by the Root River discharge. Further, written comments carry the same weight as verbal comments and the department provided a public notice period greater than 45-days with the opportunity to submit comments any time within that period.

#### Comments Received from the City of Waukesha

- 12. Bypass:** The permit includes a new provision on bypass in response to a proposal to use ballasted settling to meet the new phosphorus limits. After extensive study and review an alternative and more reliable means of meeting those limits has been selected. The technology is not a ballasted settling system and instead includes mechanical coagulation and flocculation followed by tertiary clarification and granular media filtration. The existing permit does not have a bypass monitoring requirement and because this new treatment system is similar technology as the

current tertiary filters, including a bypass sampling point 104 and subsequent conditions in draft permit section 2.2.2.1 are not required. These bypass requirements should be removed.

**WDNR Response to Comment #12:** The current permit does not reflect current ch. NR 205, Wis. Adm. Code, requirements. sample point 104 is included in the proposed permit to comply with the most recent code provisions. *The description for sample point 104 in permit section 2.1 and the language in permit section 2.2.2.1 was updated to reflect the most recent approved facility plan amendment.*

- 13. Fox Flow Measurement:** After commencement of discharge for the return flow to the Root River and as a part of the phosphorus and pump station construction projects, a new area-velocity meter will be installed to measure total plant effluent flow, where the meter will be located upstream of the return flow pump station and the flow split between the Fox and Root Rivers. A second magnetic flow meter located downstream of the return flow pumps will measure the return flow. If the total plant flow exceeds the return flow, subtracting these two meters calculates the flow rate to the Fox River. As a result, the Table 3.2.1 should list the sample type as “calculated” after the commencement of return flow discharge.

**WDNR Response to Comment #13:** The following table note was added for the flow rate parameter in section 3.2.1 of the proposed permit and section 3.1 of the fact sheet; “After the commencement of the return flow discharge the sample type for flow rate at Outfall 001 shall be “calculated”.”

- 14. Chloride Comment (a.):** The City appreciates the inclusion of seasonal interim limits that acknowledge the variability of chloride sources throughout the year. However, Section NR 106.82(9), Wis. Adm. Code, allows the Department to establish annual interim limits using 105% of the highest measured weekly average values. The Department should utilize this same calculation method for this permit renewal which would result in a limit of 690 mg/L.

**WDNR Response to Comment #14:** Section NR 106.82(9), Wis. Adm. Code, allows for either the upper 99<sup>th</sup> percentile of the permittee’s 4-day average of the representative data available to the department, or a value no greater than 105% of the permittee’s calculated highest weekly average of the representative effluent data. The 105% method is typically utilized when there is a small data set and when the data is highly variable. Where there is some variability to Waukesha’s data it tends to be variable over seasons and there is sufficient data to calculate seasonal interim limits based on the 4-day P99s. Furthermore, inclusion of the higher 690 mg/L interim limit would be counterproductive to Waukesha’s aggressive water softener optimization and chloride reduction program would not be representative of the effluent levels currently achievable and would not meet the requirements of highest attainable condition. *No changes were made to the proposed permit based on this comment.*

- 15. Chloride Comment (b.):** The analyses did not utilize the mixing zone study completed by the City to demonstrate that greater than the default 25% mixing could be used for limit calculations. Not factoring in the mixing zone results in conservative effluent limits that are stricter than what Administrative Code allows. We believe this is further justification for the higher limit requested above (see previous chloride comment (a.)).

**WDNR Response to Comment #15:** Assuming this comment is related to Outfall 006, the mixing zone study submitted for that discharge is relevant to the calculation of the water quality-based effluent limit using procedures in s. NR. 106.06, Wis. Adm. Code, and not the interim chloride limits which are discussed in comment 3.a. Since the return flow discharge to Outfall 006 is a new discharge, an antidegradation analysis was completed under ch. NR 207, Wis. Adm. Code, and was a controlling factor into the final decision of the water quality-based effluent limit. *No changes were made to the proposed permit based on this comment.*

- 16. Chloride Comment (c.):** The City believes the following updates should be made to a sentence that appears in the Substantial Compliance Determination document’ “The City has applied for another five-year variance to the chloride WQBEL for the existing discharge, however, changing the water supply from groundwater to Lake Michigan in approximately four or five years can significantly reduce chloride-based water softener loadings to the plant will reduce or eliminate the need for chloride based water softening, leading to subsequent reductions of chloride passing through the effluent.”

**WDNR Response to Comment #16:** The substantial compliance determination document and information contained within does not constitute as permit requirements or conditions. It is reasonable to assume, with the lower hardness values of the lake water, that the switch to a Lake Michigan water supply will reduce or eliminate the need for chloride-based water softening. *No changes were made to the substantial compliance determination or proposed permit based on this comment.*

- 17. Bacteria:** Completing bacteria monitoring during the non-disinfection season is not something that is required by NR 210 and would not provide any useful data in establishing water quality based effluent limits. Obtaining bacteria data would not change the requirement for only seasonal disinfection to protect the designated receiving stream uses.

**WDNR Response to Comment #17:** Section 283.37(5), Wis. Stats., allows the department to require the applicant to submit information in addition to that supplied on the permit application. Section 283.55(1)(e), Wis. Stats., allows the department to require the permittee to submit information necessary to identify the type and quantity of any pollutants discharged from a point source. Section NR 200.065(1)(g), Wis. Adm. Code, states that the department may require monitoring for any pollutant in the permit application, if its presence could be reasonably expected based on wastewater sources. Section NR 200.065(1)(h), Wis. Adm. Code, allows for this monitoring to be collected during the permit term. *No changes were made to the proposed permit based on this comment.*

- 18. Additional pH Grab:** In draft permit section 3.2.2.3, insert “grab sample” in between “recorded” and “data” in the second to last sentence to maintain consistent reporting requirements for the sample type and the reporting requirements in Section 5. The sentence should read: “The permittee shall submit a report summarizing all recorded grab sample data and the change in pH between the Clean Water Plant and the discharge site.”

**WDNR Response to Comment #18:** The suggested changes were incorporated into permit sections 3.2.2.3 and 5.4.

- 19. Mercury:** The Department’s ability to reopen a permit is not unique to mercury. Draft permit section 3.2.2.6 can be simplified while preserving the intent by replacing this section with “The Department may modify or revoke and reissue the permit if new information changes the mercury determination included in this permit.” There is no basis or need for requiring monitoring and calculation of mercury loss from or loading to the Lake Michigan basin as a result of a diversion with return flow. Wisconsin statutes do not require this, nor does 40 CFR 132 Appendix E II. A (5).

**WDNR Response to Comment #19:** The department determined that the Lake Michigan Shoreline is a high-quality water for mercury pursuant to 40 C.F.R. Part 132 App. E II. A. Because this is a high-quality water for mercury, the department must include monitoring requirements and notice requirements in the permit if BCC’s are known or believed to be present in a discharge. The department has determined that mercury is likely to be present in Waukesha’s discharged effluent to the Root River based on past monitoring data and information known about the proposed water source for the city. What is unknown is whether there will be an increase in loadings of mercury because Waukesha’s discharge to the Root River. To better understand whether there will be an increase in loadings to Lake Michigan, the department is requiring both influent and effluent monitoring in this permit. Additionally, the department is including mercury specific notice requirements and reopening language to meet its requirements under federal law. See 40 C.F.R. 132 App. E II. D. 2. *No changes were made to the proposed permit based on this comment.*

- 20. Return Flow Requirements:** The Council Approval for the Lake Michigan diversion states the return flow shall be “equivalent to or in excess of” the previous year’s diversion amount. There are multiple variations in the draft permit documents that incorrectly state the return flow shall be “equal to”. The Department should use the Council Approval requirements within these permit documents.

**WDNR Response to Comment #20:** The department does not have the authority to set limitations on flow as conditions of the WPDES permit under ch. 283, Wis. Stats. Furthermore, this language does not appear anywhere in the permit which is the governing document. *No changes were made to the proposed permit based on this comment.*

- 21. WET:** The WQBEL memo incorrectly states that WET limits are required. The second bullet below the WET Summary Checklist (page 30 of 33), should be modified to read: “According to the requirements specified in s. NR

106.08, Wis. Adm. Code, a chronic WET limit is not required. ~~The chronic WET limit should be expressed as  $1-1 T U e [-100/IWC]$  as a monthly average in the effluent limits table of the permit.~~

**WDNR Response to Comment #21:** The typo on page 30 of the WQBEL memo has been noted. This typo was not carried into the permit and a WET limit was not included in the proposed permit. *No changes were made to the proposed permit based on this comment.*

- 22. Relocated Discharge:** The return flow relocates flow from the Fox River to the Root River. For some parameters like phosphorus, the Department has treated the discharge as a new discharge. However, for antidegradation and some parameters like chlorides, the return flow is treated as a relocated discharge. The City does not agree with the Department defining the return flow as a “new discharge”.

**WDNR Response to Comment #22:** The department has different determination criteria for antidegradation and the calculation of effluent limits and the availability of compliance schedules. For purposes of an antidegradation review, the department assesses whether a proposed discharge will either be new or an increased discharge. The purpose of antidegradation is to assess the impact of a proposed “new or increased discharge” on the receiving water and to maintain existing uses of water bodies and high-quality waters. *See* 40 C.F.R. s. 131.12 and s. NR 102.05(1), Wis. Adm. Code. Because this will be the first time that Waukesha will be discharging to the Root River and the Great Lakes Basin, it is properly classified as a “new discharge” for the purpose of antidegradation. Additionally, for the purpose of calculating effluent limitations and determining the availability of compliance options and schedules, the department has pollutant specific definitions and their applicability is determined on a pollutant by pollutant basis. For examples, see ss. NR 217.11(3) and NR 106.93—106.94, Wis. Adm. Code. *No changes were made to the proposed permit based on this comment.*

- 23. Antidegradation Comment (a.):** The standard in completing the antidegradation evaluation is not “any” lowering of water quality. Instead, antidegradation is an evaluation of significant lowering of water quality.

**WDNR Response to Comment #23:** An antidegradation evaluation must be completed for any proposed new or increased discharge. Under the framework of s. [NR 207.04\(2\)](#), Wis. Adm. Code, the determinations of “any lowering of water quality” and “significant lowering of water quality” are both generally necessary to assign effluent limitations. Because the City waived the procedure in s. [NR 207.05\(2\)](#), Wis. Adm. Code, that differentiation is unnecessary in the particular. Since this differentiation has no implications on discharge limitations or the allowability of the discharge, the department has chosen not to rewrite the antidegradation memo to reflect those differences. *No changes were made to the proposed permit based on this comment.*

- 24. Antidegradation Comment (b.):** The antidegradation analysis should not include an evaluation of indicator parameters when waiving the determination of “significant lowering of water quality”. [The City] disagrees with many of the statements regarding specific parameters. For example, where no background data of copper exists, the Department cannot determine that return flow would significantly lower water quality for copper. Another example is that the memo does not recognize the previous determination, of an improvement in water quality as a result of return flow, such as a phosphorus discharge limit of 60 ug/L (0.06 mg/L).

**WDNR Response to Comment #24:** The department must determine limitations based on whether there are cost-effective alternatives that would prevent a significant lowering of water quality. Therefore, while the City waived the procedure in s. [NR 207.05\(2\)](#), Wis. Adm. Code, the department must still consider whether a parameter in the discharge will cause a significant lowering of water quality; the alternative of no additional treatment or pollution control alternatives was considered for each parameter. For water bodies where the department has insufficient data to determine ambient background concentration of a given parameter, the department frequently uses similar water bodies to make that determination. Since the City did not provide such information for the Root River, as required under s. [NR 207.04\(1\)\(b\)](#), Wis. Adm. Code, the department used data from representative water bodies to determine whether there were alternatives that would prevent a significant lowering of water quality. An evaluation on the impacts of the discharge on ambient phosphorus in the Root River and downgradient waters was outside the scope of the antidegradation memo. *No changes were made to the proposed permit based on this comment.*

**25. Antidegradation Comment (c.):** Lake Michigan has been formally designated in Wisconsin Administrative Code as an Exceptional Resource Water. However, there has not been a determination that the Lake Michigan shoreline is a high-quality water. This is documented in the antidegradation evaluation; however, it should be clarified that Lake Michigan has not been classified as a high-quality water.

**WDNR Response to Comment #25:** Per 40 CFR part 132 Appendix E I.B., “high quality” is defined on a parameter-by-parameter basis for the Great Lakes. By this definition, the Lake Michigan lakeshore at Racine is high quality for most parameters, with the exception of PCBs and, as discussed in the antidegradation memo, possibly mercury. The antidegradation procedures outlined in ch. NR 207, Wis. Adm. Code, is not limited to high quality waters, nor is that term used in Wisconsin Administrative Code with respect to antidegradation. *No changes were made to the proposed permit based on this comment.*

Comments Received from EPA or Other Government Agencies and Any Permit Changes as Applicable

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 found by reviewing ch. NR 203, Wis. Adm. Code, s. 283.63 Stats., and other applicable law, including s. 227.42, Stats.

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 (262) 574-2159 or by writing to the Department. Reasonable costs (15 cents per page for copies and 7 cents per page for scanning) 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.