

**Preliminary Questions Submitted through the Great Lakes Compact Council to
Wisconsin DNR Regarding Its Technical Review of the City of Waukesha's
Proposed Diversion of Great Lakes Water for Public Water Supply with Return
Flow to Lake Michigan**

**Prepared by the Michigan Office of the Great Lakes, Michigan Department of
Environmental Quality on behalf of the Interagency Technical Review Committee**

[Unless otherwise noted, references are to January 2016 Wisconsin DNR Technical Review. This list of questions does not preclude the possibility that others may follow from MDEQ]

Water Supply/Flow Rates/Return Flow Related Criteria

1. As acknowledged at page 3, one of the legal requirements of the Compact is "The Water shall be used *solely* for the Public Water Supply Purposes of the *Community within a Straddling County that is without adequate supplies of potable water.*" (Compact section 4.9.3.a; emphasis added.) In its review of the Application, is the Wisconsin DNR bound by the Wisconsin's Compact implementation statute, which defines "Community within a straddling county" as "any *city, village, or town* that is not a straddling community and that is located outside the Great Lakes basin but wholly within a county that lies partly within the Great Lakes basin." (Wis. Stat. 281.346(1)(d); emphasis added)?
2. Here, as noted at page 1, the Applicant is the City of Waukesha. But, as stated at page 1, the Application proposes that Great Lakes water be diverted for use not only by the City of Waukesha, but also "portions of the City of Pewaukee and the towns of Waukesha, Genesee, and Delafield." Have any of those other municipal entities formally joined in the City of Waukesha's Application? If so, please identify the information in the agency record documenting that these other municipal entities are co-applicants with the City of Waukesha.
3. Have any of these other municipal entities asserted that they currently are without adequate supplies of potable water? Has the Wisconsin DNR determined that these other municipal entities are without adequate supplies of potable water? If so, please identify the information in the agency record relied upon in making such a determination.
4. The Technical Review discusses, at pp. 46-51, the requirement, in Wisconsin's Compact implementation statute, Wis. Stat. 281.346(4)(e)1.em, that "[t]he proposal is consistent with an approved water supply service area plan under s. 281.348 that covers the public water supply system." The Technical Review refers to a proposed water supply service area plan, apparently not yet approved by the Wisconsin DNR that would include portions of the City of Pewaukee and the towns of Waukesha, Genesee, and Delafield. In the course of that discussion, the Wisconsin DNR quotes the Compact definition of "community within a straddling county" as "any incorporated city, town *or the equivalent thereof* that is located outside the Basin but wholly within a County that lies partly within the Basin that is not a Straddling Community." (Compact section 1.2;

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emphasis added in the Technical Review.) The Wisconsin DNR then states: "The department considers the delineated water supply service area to be a 'community within a straddling county' under the Compact and Wisconsin's Compact implementing laws and regulations." (Technical Review, p 47.) With respect to that interpretation:

- a. Please explain whether, and how, under Wisconsin law, the Compact definition of the term takes precedence over the definition to the same term in the more specific Compact implementing statute, Wis. Stat. 281.346(1)(d), that the Department is applying in its Review.
 - b. Please identify any information contained in the legislative history of the Compact, and/or the Wisconsin Compact implementing statute supporting the Department's conclusion that the phrase "or the equivalent thereof" in the quoted Compact definition of "community" was intended to, and does include a water supply service area delineated in a plan.
 - c. Is a water supply service area a legal entity under Wisconsin law?
 - d. Is a water supply service area eligible to apply for a diversion of Great Lakes water under the Compact and Wisconsin's Compact implementing legislation? Please explain.
5. In 2009 WDNR approved a diversion for the City of New Berlin based on an analysis that the City had a demonstrated need for alternate water supply due to radium contamination. A water service area was approved that is a contiguous area served by the Milwaukee Metropolitan Sewerage District. This water service area appears to have been defined based on a determined need for a new water supply for the City of New Berlin. With the Waukesha application it appears that the water service area was defined for the purpose of expanding the area served by the diversion and not based on a determined need for a new supply in the City of Pewaukee and the towns of Waukesha, Genesee and Delafield. Given that the City of New Berlin provided a justification for a new water supply has Pewaukee, Waukesha (town), Genesee and Delafield done the same?
6. In the event that there is no independent need established for Pewaukee, Waukesha (town), Genesee and Delafield what would the diversion demand be for just the City of Waukesha?

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7. It is not clear why the daily return flow rate is set on an annual basis. With continuous monitoring of flow why can't it be adjusted monthly - that is - each month the daily return flow is set at the rate of the last month's withdrawal?
8. What have the other communities said about being included in the water service area? Who initiated the water service area definition? If they do not have an independent need for a new water supply why were they asked to join? The document includes in communities that are not specifically requesting additional water supplies either now or in the future which casts doubt on their demand forecasts and seems to imply that the City is thinking of marketing this water as a growth opportunity for new industries, not a real drinking water need for the community. Please explain why these communities were included in the projections for water needs?
9. Has WDNR responded to the critique offered by NWF, et al through the report prepared for them by GZA dated July 9, 2015? In essence they suggest with treatment existing wells can supply sufficient water. WDNR indicates in the January 2016 "Comments and Responses – Draft Technical Review" that existing wells can only supply 9.3 MGD – and not the required max flow of 11.1 MGD. If it is concluded that a max flow of 9.3 is all that is needed would the wells satisfy the need without Great Lakes water?
10. The growth projections have been questioned - please explain whether a flow of 6.3 to 6.7 may not be a better withdrawal flow given declining use rates and if the communities outside the City of Waukesha are not included?
11. What is the commercial use of water in this area and what are the growth estimates for this sector?
12. Given the concern about Root River flooding potential – was consideration given to adjusting the return flow rate to alleviate flooding concerns during major storm events? While still maintaining the overall return flow requirements?
13. Is there a demonstrated need that all of the local units of government in the Waukesha Water Supply Area must receive their drinking water from Lake Michigan or should the diversion request, if authorized, be restricted to the City of Waukesha?

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14. Waukesha is currently treating radium at some of their deep wells and that other municipal water supplies in Wisconsin are also treating radium so treating radium is technically possible. Is treating the radium in the groundwater at each affected source (prior to blending) a feasible and prudent alternative?
15. Given the range of very feasible diversion options, please explain why and how the preferred option meets the Compact criteria when compared to the other options?
16. Page 63, Finding 2, states that "...up to 10.1 MGD would be returned daily to the LMB..." whereas other references seem to indicate that the previous year's demand (whatever it is) would be returned to the Lake Michigan Basin. Since these could be different numbers and could allow escalating withdrawals year-to-year (For example, a "10.1 MGD max" scenario could return 10.1 MGD each year while withdrawals went from 10 to 15 to 20 to etc. MGD), please explain how this scenario will not be allowed.
17. The R1 section of the WDNR document uses the term "withdrawal" throughout, but it isn't clear to us whether this is solely new Lake Michigan Basin withdrawals, or if they would continue some withdrawals from existing wells. Please define the word withdrawal in the context of each proposal.
18. Please explain how the requirements for "all water" to be returned and "maximizing return" of Lake Michigan Basin water are not inconsistent.
19. The WDNR review uses data from 2005 – 2012, and identifies 2014 as a year in which the WBR method was invalid due to higher water use in winter. Is 2014 a serious outlier, or does these high winter uses occur more frequently than indicated?
20. What other straddling communities are in the same water supply position as Waukesha in WI?
21. On Page 71, Figure 15, data is provided as quantitative diagram by source water. If we understand this correctly, the "sales" box in this diagram represents 8% of

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total withdrawals. If that's the case, the figure is definitely not scaled accurately. For (another) example, while Alternative 6 would "regularly return approximately 100% of the volume of water withdrawn", it's not clear where the water would come from. Please explain the details in this figure.

22. Where do the additional communities included in the application (portions of the City of Pewaukee and the towns of Waukesha, Genesee, and Delafield) receive their water from now? Where would these communities obtain their water from in the future, if not from Lake Michigan?
23. What alternative considerations have been given or inquires made to the City of Milwaukee to potentially utilize their water supply and/or their treatment of waste water as the return flow?

Conservation/Environmental/Natural Resource Impact Related Issues/Criteria

1. Please confirm the measures that will be taken to ensure no invasive species will be transferred to the GLB via the mixed return flow that may include MRB water?
2. Has WDNR considered if it is better to leave the radium in place? That is it is better to avoid extracting GW with radium and treating it to remove the radium – and then have to dispose of it – creating a waste issue that can be avoided if the GW is not used?
3. Please explain how a few local environmental impacts from the use of other water supplies than the Great Lakes by Waukesha should be more palatable than large scale future Great Lakes impacts with the door open for more straddling counties seeking Great Lakes water.
4. Given the large change in discharge flows expected from the preferred option going into the Root River, please explain how you will avoid widespread geomorphic damage, particularly to sediment and material transport, to the Root River?

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5. Please explain how Waukesha will prevent invasive species movement from the Mississippi River system into the Great Lakes Basin when there may be Waukesha sanitary system outages of any type?
6. On Page 68, there is a reference to a Root River flood exception. What does this refer to as it is unclear in the document?
7. We know it is stated that the withdrawal from Lake Michigan would have the least environmental impact out of their alternatives, but if Lake Michigan was removed as an option, would any of the alternatives considered by WDNR be approvable under their own merits? What would the analysis look like if Lake Michigan weren't even an option?

Permits/Regulatory/Enforcement Related Issues/Criteria

1. The requirement for return flow is essential. What legally enforceable mechanism does WDNR have to ensure the return flow requirement will be sustained and enforced? For example, if the diversion is allowed and subsequently the NPDES requirements can't be met or if the return flow fails for any reason what action is Wisconsin prepared to take to stop the diversion or require Waukesha to establish an alternate return flow solution?
2. The draft Technical Review leaves uncertainty about the ability and cost to meet NPDES requirements in the return flow to Root River. Is there any more analysis that can be shared on the likely ability to actually meet and manage discharge requirements?
3. Does WI DNR intend to issue a draft Wisconsin Pollutant Discharge Elimination System (WPDES) permit that meets Wisconsin water quality standards (i.e. for phosphorus, DO, total suspended solids, and chloride among others) prior to the approval of a diversion from Lake Michigan? In order for us to complete our review we are asking for copies of the following information from WIDNR:
 - a) Draft NPDES permit for the Waukesha WWTP to the Root River
 - b) Draft NPDES permit fact sheet

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- c) NPDES permit application
 - d) Draft Permit decision memo
4. If Waukesha's diversion request is approved as proposed, or modified with conditions, what will WDNR do to monitor Waukesha's compliance with the terms and conditions of WDNR's permit and any additional terms and conditions imposed by the regional approval under the Great Lakes Compact?
 5. What enforcement provisions would there be in WDNR's permit to enforce any terms and conditions that are part of a conditional regional approval under the Great Lakes Compact?
 6. Are the stormwater flows separate from sewerage in the Waukesha sanitary system? Will both be discharged to the Root River? If so, how will Waukesha prevent invasive species movements to the Great Lakes Basin by stormwater discharges?
 7. Given that the City of Waukesha is a new discharger to an already impaired Root River, please explain how there are no other feasible alternatives available that would allow little or no degradation of water quality?
 8. The document implies that all waters would be mixed at the Wastewater Treatment Plan. Is this correct? Are there any other unstated possible mixing locations such as stormwater contributing sources?