

March 14, 2016

Second set of Supplemental Questions to WDNR regarding Waukesha Diversion Application

Note: *In keeping with the required written record we have prepared a second set of supplemental questions and comments. We recognize that it may seem to WDNR that some questions may appear burdensome – we apologize if that occurs. The requirement that all questions must be submitted in writing is cumbersome at best. Given the limited time for the review process we may ask questions that seem uninformed. However, the objective is to try and highlight issues/problems that need solutions. We are seeking ways to expedite this review but be as thorough as possible. We also appreciate the thoughtful and detailed responses to earlier questions.*

- 1 Please provide a summary of the removal efficiencies for the alternative means of treating radium and forecast the amount of residual radium being released into the environment from current and proposed treatment methods. For example, if radium contaminated groundwater is treated and the concentrate is discharged to the sanitary sewer how much residual radium passes through the WWTP to be discharged into the Fox River?
- 2 Is it true that there is no established NPDES Radium discharge standard?
- 3 It has been suggested that using Milwaukee as a water source and return flow to Milwaukee would avoid issues on the Root River, utilize existing capacity from the Milwaukee system and cost less than the proposed alternative. WDNR has stated that the decision to use water from Oak Creek was made by the applicant. Please have the City of Waukesha explain why the option of accepting water from Milwaukee was not selected if it costs less and would result in avoiding any adverse impacts on the Root River.
- 4 Please provide a written summary of the WWTP design and operating controls described during the site tour that would prevent untreated water (and potentially invasive species) migration from MRB.
- 5 Please describe the history of the deep aquifer and which other communities have stopped using the deep aquifer (New Berlin included). Is it true that Milwaukee previously used the deep aquifer and stopped doing so in the 60's when they took water from Lake Michigan?
- 6 How much water could be produced from the shallow water options including from the western portion of Waukesha County before causing adverse impacts on the surface water features?
- 7 Is the deep aquifer that Waukesha currently draws from the same aquifer that communities in northern Illinois draw from? And what ability does Wisconsin have to control the overall withdrawal rate from this aquifer – in other words what mechanism are in place to attempt to establish a sustainable withdrawal rate from the confined aquifer whether this application is approved or not?

- 8 It is asserted that alternatives not involving a diversion of water from Lake Michigan would result in unacceptable impacts to Wisconsin's water resources, including wetlands, that are outside of the Great Lakes basin and that those impacts render the alternatives unacceptable. Are the identified impacts prohibited from occurring under Wisconsin law? If so, please explain. If the premise is to avoid these impacts, what assurances are in place to prevent these impacts from occurring in the future due to other projects, including other water withdrawal projects?
- 9 Please provide an outline of the sequences of events leading up to the issuance of an NPDES permit that will ensure no adverse impacts to the Root River and its ecosystem. Does Wisconsin intend to condition any withdrawal on full compliance with the NPDES permit conditions?
- 10 It has been suggested that increased flow in the Root River could adversely impact benthic organisms that rely on low water level to avoid fish predation. Is it possible to split the return discharge point (in other words discharge a portion of the flow in more than one location upstream from the proposed discharge point) to disperse the potential for a sudden increase in flow at a single point during low flow conditions?
- 11 GZA has suggested on behalf of CIC that a new technology by Water Remediation Technology (WRT Z-88 System) can cost effectively treat radium and is, in fact, being used by several Wisconsin communities to treat radium from water supply wells. Did Waukesha and Wisconsin consider WRT Z-88, if not, why not, and if so, what were the results of that analysis? What is the removal efficiency of the Z-88 system – that is how much radium would still be released into the environment?
- 12 Please explain how this proposed diversion is not inconsistent or in violation of Wisconsin common law, riparian rights within the Great Lakes Basin and the public trust doctrine as understood and applied under Wisconsin law.

WATER SERVICE AREA QUESTIONS

- 13 According to transcripts from a public hearing (May 12, 2011) in the Town of Waukesha the City of Waukesha represented to the Town that if it joined the proposed service area the Town could ask the City for water in the future and would not have to go thru the Compact application process. Explain how that approach – while no doubt pursued in good faith, does not circumvent the Compact requirements that any community seeking Great Lakes water must apply for it, demonstrate a need for a new supply, demonstrate that it has implemented required water conservation measures and that no reasonable alternative exists to the request for Great Lakes water? It is recognized that good utility service planning may dictate local community collaboration and cooperation but how does that process meet Compact criteria for approval of a diversion by each community?

- 14 As a follow up – is it correct that City of Waukesha identified an area within the Town of Waukesha (Lather property?) as an option for an alternative shallow well water supply and that option was rejected because it could not produce sufficient water supply for City needs without adverse draw down of surface waters? However, if that was a suitable source of water at a lower demand – say a million gallons per day how can the Town of Waukesha demonstrate that it needs Lake Michigan water when there is a source within its own boundaries that was considered suitable by the City?
- 15 How much of the requested Lake Michigan water supply represents growth within the City boundaries and how much is outside the City? Is it correct that the City can meet its projected needs with a flow of about 8.2 MGD? And that the requested 10.1 MGD adds water for communities outside the current City boundaries? What portion of the current flow serves what area outside the City boundaries? In effect there are a series of categories of requested water supply demand: Current City demand, future growth within the City, areas currently served by the City outside its boundaries, currently built out areas outside the City with other water supplies, and future growth outside the current City boundaries. Please identify the amount of water allocated to each in this request.
- 16 Please identify the homes/residents/property served by the City outside boundaries and the reasons service was extended outside the City boundaries – for example, the private wells were contaminated or not usable for what reason?
- 17 Please describe what is inadequate, unsuitable or unusable about the existing water supplies in the areas outside the City boundary that were included in the expanded service area. Please supply this information community by community and as appropriate sub area by sub area within each community. Please demonstrate with this response how the Compact Criteria have been addressed and met for each community.
- 18 As we understand the Wisconsin water supply service area planning law (Wis Stat 281.348) a community within a designated planning area is NOT OBLIGATED to join a larger water supply system if they chose to remain independent. And in fact, the Town of Waukesha could vote to join the City of Waukesha water supply service area and NEVER seek or obtain water from the City. Is that correct? If so, then how can merely being part of a water service area plan constitute a demonstrated need for water under the Compact if the community never asks for such service to be extended? And how can a simple request for service comply with the Compact criteria?
- 19 How much of the current City of Waukesha water service area is currently on septic systems? And how much of the expanded area is currently on septic systems?
- 20 Will any residences and other facilities that are currently on septic systems be required to connect to sanitary sewers when they are connected to the municipal water supply? If not, how much (volume & %) of the requested diversion will be lost to the shallow groundwater in the Mississippi River Basin via septic systems? If water is lost via septic systems will

infiltration & other inflow into the sanitary sewer system off-set the volume lost to shallow groundwater via septic systems?

- 21 Please explain if the proposed City of Waukesha water service area plan has been in fact approved, and if not, when will it be approved?
- 22 The water service are plan indicates that limited portions of adjoining communities would be served by the City of Waukesha. Please explain where each of these communities obtain water for the remaining portions of their communities: Delafield –other 91%, Genesee – other 85%, Pewaukee – other 96%, and Town of Waukesha – other 16%? Why is that source of water in each community not available for the area of each community to be served by the City of Waukesha in the proposed water service area plan?
- 23 Is it true that the Waukesha water service area plan is not yet formally approved? If not, how can this application rely on that plan?