



June 3, 2024

The Honorable Shawn Reilly  
 201 Delafield Street  
 Waukesha, WI 53188  
 (via email)

Subject: 2024 Documentation of Reporting Requirements for City of Waukesha Diversion Approval

Dear Mayor Reilly:

On February 27, 2024, the Department of Natural Resources (DNR) received the City of Waukesha's (City) annual report (Report) related to the City's approval for a diversion of Great Lakes water. The DNR's June 2021 diversion approval requires the City to submit annual reporting information to the DNR by March 1<sup>st</sup> of the following year. The following is a summary table of the information provided in the City's diversion report for reporting year 2023.

Lake Michigan Diversion	467,534,168 gallons
Treated Wastewater Discharge to Root River	489,781,555 gallons
Water volume returned to Lake Michigan compared to diversion	104.8% (22,247,387 gallons more water returned than diverted)
Residential per capita water use per day	46 gallons per person per day
Ratio of maximum day water demand to average day water demand	1.65
Non-revenue water	10%
Consumptive Use (domestic, distribution system losses, incorporation into products)	21%

Below, the DNR approval reporting requirements are in italics, followed with a summary of our review of the City's annual report.

1. *The City shall summarize that the diversion was implemented consistent with the requirements of the Council Decision. The total amount of water purchased daily, monthly, and annually from the City of Milwaukee, including the location(s) of the water meter used to determine the amount of water purchased.*  
 See section A of the Report. The City began commissioning the Lake Michigan water system August 15, 2023 and completed the transition to Lake Michigan water supply on October 9, 2023. The City purchased a total of 467,534,168 gallons from the City of Milwaukee in 2023. The City purchased 423,229,900 gallons from the City of Milwaukee for drinking water after October 9, 2023 (5.04 million gallons per day).
2. *The total amount of water sold monthly to each category of customer within the approved diversion area.*  
 The City sold a total of 1,726,513,000 gallons of water in 2023 (4.73 million gallons per day). Prior to

October 9, 2023 the source of the City water sold was the City's groundwater wells. See section C for details on water sold<sup>1</sup>.

3. *The daily, monthly, and annual volume of treated wastewater discharge returned to the Root River and the daily, monthly, and annual volume of treated wastewater discharge returned to the Fox River.* In 2023, the City discharged 489,781,555 gallons of treated wastewater to the Root River and the City discharged 2,555,556,000 gallons of treated wastewater to the Fox River<sup>2</sup>. See section D of the Report for details on treated wastewater discharge.
4. *The total consumptive use as defined in Wis. Stat. §281.346(1)(e).*

The City reports returned 104.8% of the volume of water diverted from Lake Michigan in 2023. The City returned 22,247,387 more gallons of water to Lake Michigan than they purchased and diverted from the City of Milwaukee. The City's wastewater treatment plant has additional water from infiltration and inflow (from the Mississippi River Basin) into the sewer system that provides the source for additional water available to discharge to the Root River. The City's total 2023 consumptive use was 409,607,600 gallons or 21% of the water withdrawn from wells and purchased from the City of Milwaukee, using the Winter Base-Rate Method, plus system water loss and reported consumptive use from industry. See section E of the Report for details on consumptive use.
5. *Water use intensity metrics.*

See section F of the Report for calculations for residential per capita water use, average day water use per residential equivalent units, and maximum day demand.
6. *A summary of the impacts of the implementation of conservation and efficiency measures.* The City provided a summary of the impact of water conservation and efficiency measures, see section F of the Report.
7. *A description of any additional conservation and efficiency measures implemented.*

See section G of the Report. The City updated its Water Conservation and Efficiency report in 2022 and plans to offer rebates for water softener disconnection and removal.
8. *A statement verifying that no customers outside of the diversion area were sold Lake Michigan water.*

See section H of the Report.
9. *A spatially explicit description of the properties served by the City's water utility, in the manner prescribed by the DNR.* See Appendix D, the City provided a map of the properties served by the City's water utility, in 2023. The City provided a GIS data layer of the properties served by the City's water utility on May 2, 2024. The DNR reviewed the GIS data layer against the approved diversion area, all properties included in the GIS layer are located within the diversion area.

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<sup>1</sup> The City's water sales include 423,339,900 gallons purchased from the City of Milwaukee and 1,303,173,100 gallons withdrawn from the City's wells.

<sup>2</sup> Note that the volume discharged to the Fox River covers the period January 1, 2023 – December 31, 2023 and the volume discharged to the Root River covers the period August 1 – December 31, 2023.

10. *A report of any City wells filled and sealed or changed to emergency use status in the past year. A description of deep aquifer groundwater wells maintained for emergency use, as allowed under Wis. Admin. Code § NR 810.22, and use of these wells in the previous year.*

Appendix E includes a letter from WDNR with conditions that all wells be placed in emergency well status and operated only with in accordance with NR 810.22.

11. *A summary of the implementation of the pharmaceutical and personal care products recycling and reduction program in the past year.*

Appendix F provide a report on the implementation of the City's pharmaceutical and personal care products reduction program in 2023.

12. *For at least 10 years after the date the diversion begins, the City shall annually report the results of Root River monitoring to DNR. The report shall include a summary of the monitoring results and a summary of any impacts to the Root River from the City's wastewater discharge.*

Appendix G provides a report on the pre-diversion monitoring program including stream flow, water quality, fish, habitat and macroinvertebrates. The City will provide an analysis of monitoring data from October – October annually. Because the diversion began in October 2023, the report does not include Root River monitoring data for October 2023 – December 2023. The City is required to upload all water quality monitoring data to SWIMS.

13. *A statement of compliance with all applicable federal and state permits and approvals.*

The City provided a statement that it has complied with all applicable federal and state approvals.

The DNR requests you provide the follow additional information:

- 1) Provide confirmation that the City is in compliance with the conditions of the November 24, 2023 Approval of Extended Well Abandonment Agreement and provide a long term plan for the deep aquifer wells including: which wells will be maintained for emergency use, which wells will be filled and seals and the timeline for filling and sealing wells.
- 2) Provide the water quality data collected for the Root River for October 1, 2023 – March 31, 2024, by July 1, 2024. The DNR will work with the City to ensure these data are uploaded to SWIMS. Provide the water quality data collected for the Root River for April 2024 – September 30, 2024, by December 31, 2024.
- 3) Provide an updated pre-diversion report with the revisions requested by email and subsequent discussion by July 1, 2024.

For future reports, we ask you to provide the following:

- 1) For Section D, include a graph of daily wastewater return with a line showing threshold of required return.
- 2) For Section I/Appendix D, provide a GIS data layer of the properties served by the Waukesha Water Utility for the reporting year.

Thank you for submitting the required diversion reporting in compliance with your diversion approval. In addition to the reporting requirements above, the City has also submitted documentation demonstrating compliance with Tier 3 water conservation as required by section 6 of the Approval and ch. NR 852, Wis. Admin. Code. The information provided in the Report appears to meet the annual reporting requirements. The City's 2024 Annual Report is to be submitted to the DNR by March 1, 2025.

Please contact Shaili Pfeiffer, [Shaili.pfeiffer@wisconsin.gov](mailto:Shaili.pfeiffer@wisconsin.gov), (608) 219-2216, with any questions regarding your annual reporting.

Sincerely,

A handwritten signature in cursive script that reads "Adam Freihoefer".

Adam Freihoefer  
Section Chief, Water Use Section  
Bureau of Drinking Water and Groundwater

cc.

Dan Duchniak, General Manager, Waukesha Water Utility, (email only)  
Tony Knipfer, PSC (email only)  
Shaili Pfeiffer, Natural Resources Specialist, DNR (email only)  
Steve Elmore, Drinking Water and Groundwater Bureau Director, DNR (email only)  
Jim Zellmer, Deputy Division Administrator, DNR (email only)