

BEFORE THE STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL MANAGEMENT DIVISION

FINDINGS OF FACT
CONCLUSIONS OF LAW
AND DIVERSION APPROVAL

The Wisconsin Department of Natural Resources (DNR) has the authority under Wis. Stat. §§ 281.343(4n)(c) and 281.346(4)(e), to approve a proposal to begin a diversion of Great Lakes water to an area within a straddling community but outside of the Great Lakes basin if certain conditions are met. DNR has reviewed an application from the City of Waukesha, a community in a straddling county, for a proposed diversion of Great Lakes water, considered the Great Lakes St. Lawrence River Water Resources Regional Body (Regional Body) Declaration of Finding, No. 2016-1, (Declaration of Finding), incorporated the conditions of the Great Lakes-St. Lawrence River Basin Water Resources Council (Compact Council) Final Decision No. 2016-1 (Council Decision) and issues the following Findings of Fact, Conclusions of Law, and Diversion Approval.

FINDINGS OF FACT

The bases for these findings as listed below are intended to highlight major reasons for reaching these findings without containing an exhaustive listing of every basis in the record that supports each finding.

The DNR finds that:

- 1) The City applied to DNR for a diversion of Great Lakes water under Wis. Stat § 281.346(4)(b) in May 2010 and provided an updated application in October 2013.
- 2) The application and supplemental materials included the following:
 - a. The initial application included the application and Appendices A – P and additional supplemental information.
 - b. The updated application Volume 1 – 5 in October 2013 and additional supplemental materials provided to the DNR between 2010 and 2015 before the application was forwarded to the Regional Body for Regional Review. (Appendix A)
- 3) The DNR held informational meetings, question and answer sessions, and public hearings on the DNR’s draft City of Waukesha Diversion Environmental Impact Statement and the DNR’s draft Technical Review for the City of Waukesha’s Proposed Diversion of Great Lakes Water for Public Water Supply Purposes with Return Flow to Lake Michigan on August 17 and 18, 2015 at Carrol University Center for Graduate Studies, 2140 Davidson Rd, Waukesha, WI 53186; Zilber School of Public Health – University of Wisconsin Milwaukee, 1240 N. 10th St., Milwaukee, WI 53205; and Racine Masonic Center, 1012 Main St., Racine, WI 53403.
- 4) In January 2016, the DNR submitted the City’s application, the DNR final technical review (DNR technical review), and the DNR’s preliminary final City of Waukesha Diversion Environmental Impact Statement, to the Regional Body and the Compact Council.
- 5) The Regional Body issued a Declaration of Finding on the City of Waukesha Application on May 18, 2016. In the Declaration, the Regional Body found that the City’s application satisfied the criteria for a diversion of Lake Michigan water and that Wisconsin has the authority to manage and regulate the diversion in accordance with specific conditions set forth in the Declaration.

- 6) The Compact Council issued a Final Decision, No. 2016-1 (Council Decision), on the City of Waukesha Application on June 21, 2016, approving the diversion with conditions. The Compact Council set an Approved Diversion Amount of 8,200,000 gallons per day as an annual average day demand.
- 7) The City is a “community within a straddling county,” because it is located outside the Great Lakes Basin but wholly within a county (Waukesha County) that lies partly within the Great Lakes Basin. (See Council Decision, Finding 1).
- 8) The City’s diversion application proposes to provide Lake Michigan water to the Waukesha Water Utility to replace its current groundwater supply.
- 9) The diverted water requested by the City will be used solely for public water supply purposes. The Waukesha Water Utility is a public water supply system as defined by Wis. Admin. Code § NR 811.02(56), and is a public water utility under Wis. Stat. § 196.01(5), subject to the Public Service Commission of Wisconsin (PSC) regulation, owned by the City with operations oversight by the Waukesha Water Utility Commission. (See DNR technical review section S1; see also, Council Decision, Finding 2).
- 10) The Waukesha Water Utility distributes water to the public through a physically connected system of treatment, storage, and distribution facilities serving a group of largely residential customers and serves industrial, commercial, and other institutional customers. (See DNR technical review section S1).
- 11) The City is without adequate supplies of potable water due to the elevated levels of radium, a known carcinogen posing a public health threat, in the current groundwater supply. (See DNR technical review section S1; see also, Council Decision, Finding 3).
- 12) The City has seven deep aquifer wells. The City submitted a letter dated April 26, 2021 indicating that no wells will be used for water supply after the change to Lake Michigan water supply. After beginning the Lake Michigan water supply, one well will continue to be used only as a monitoring well by USGS, and the remaining deep aquifer wells will be filled and sealed or only used for emergency purposes.
- 13) The City will return a volume of water approximately equal to the volume of water withdrawn from Lake Michigan the previous year. Therefore, the City will maximize the amount of water returned to the Lake Michigan watershed and will minimize the amount of water from outside the Lake Michigan watershed that is returned to the Basin. (See DNR technical review section R1; see also, Council Decision, Finding 7).
- 14) The City implements an ongoing program to reduce the amount of rainfall induced infiltration and inflow entering the sanitary sewer system as part of its Wisconsin Pollutant Discharge Elimination System permit, No. WI-0029971-09-0. (See DNR technical review section R1).
- 15) The City does not have a reasonable water supply alternative within the Mississippi River basin. (See DNR technical review section S2; see also, Council Decision, Finding 4).
- 16) The DNR reviewed water supply alternatives to the proposed diversion from the Mississippi River Basin and Lake Michigan. The DNR reviewed these alternatives on the basis of cost, environmental sustainability, public health protection, and environmental impact as required under the Wisconsin statutory definition of “reasonable water supply alternative” (See DNR technical review section S2).
- 17) Regarding public health protection, the City’s current water supply does not meet the state and federal radium standards. At the time of application, the City was under a court order to comply with the state radium standard by June 30, 2018. The City is now under a court order to comply with the state radium standard by September 1, 2023, providing time for the construction of a Lake Michigan water supply. (See DNR technical review section S1; see also Am. Stipulation and Order for Am. J., State of Wis. v. City of Waukesha, No. 09-CX-04 (Wis. Cir. Ct. Waukesha County July 20, 2017)).

- 18) The DNR reviewed the six water supply alternatives proposed by the City with water sources from the Mississippi River Basin and Lake Michigan for environmental impacts. The proposed water supply alternatives that included the Mississippi River basin sources were all similar in cost to a Lake Michigan water supply and all of the proposed water supply alternatives would be able to meet all state and federal public health standards (including the radium standard). However, none of the Mississippi River basin alternatives is as protective of public health as the proposed Lake Michigan water source, none is as environmentally sustainable as a Lake Michigan water supply, and all are likely to have greater adverse environmental impacts than the proposed Lake Michigan alternative. (See DNR technical review section S2).
- 19) The proposed diversion from Lake Michigan will not endanger the integrity of the Great Lakes basin ecosystem. (See DNR technical review section IA1 and IA2; see also, Council Decision, Finding 8)
- 20) The City submitted a Water supply service area plan as part of their diversion application (Volume 2). As a condition of the water supply service area plan approval, the water supply service area plan was amended to conform to the diversion area designated in the Council Decision.
- 21) Part of the City's current water supply, the deep aquifer, is derived from groundwater that is hydrologically interconnected to waters of the Lake Michigan Basin. (See DNR technical review section AC1; see also, Council Decision, Finding 11).
- 22) The need for the proposed diversion cannot be reasonably avoided through the efficient use and conservation of existing water supplies. (See DNR technical review section C1; see also, Council Decision, Finding 6).
- 23) The City submitted a Water Conservation Plan as part of their diversion application (Volume 3). The City submitted Water Conservation Plan updates on November 3, 2015 and February 3, 2021. In support of the February 3, 2021 update the City also submitted its 2019 Water Conservation Plan Report to the PSC.
- 24) The City forecasts 1.0 million gallons per day (MGD) in water savings due to conservation and efficiency measures by final build-out (approximately the year 2050). This 1.0 MGD represents forecast demand that can be reasonably avoided through conservation and efficiency and the DNR has taken this into account in calculating projected demand for the water supply service area. (See DNR technical review section S4).
- 25) The City has demonstrated a commitment to implementing water conservation and efficiency measures that are environmentally sound and economically feasible. (See DNR technical review section C2)
- 26) The City has implemented a water conservation plan.
- 27) The City withdrew 2,172,548,000 gallons of water in 2016. The City withdrew 1,937,518,000 gallons of water in 2020. The City's water withdrawals have decreased by eleven percent between 2016 and 2020.
- 28) The City will receive Lake Michigan surface water from the City of Milwaukee. Milwaukee Water Works has a water use permit, dated Dec. 8, 2011, issued pursuant to Wis. Stat. § 281.346(5)(c), with an approved water withdrawal amount of 380,000,000 gallons a day, as determined under Wis. Stat. § 281.346(4g), and established as the baseline per Wis. Stat. §§ 281.343(4t)(b) and 281.346(4e), based on the maximum hydraulic capacity of the most restrictive component of the water supply system as of Dec. 8, 2008.
- 29) The City provided evidence of support from the City of Milwaukee to provide the City with Lake Michigan water. The evidence of support was in the form of City of Milwaukee Common Council Resolution 171126, dated November 16, 2017.
- 30) The DNR notified the Regional Body and Compact Council of the change from the proposed water supplier (City of Oak Creek) in the 2013 application to the City of Milwaukee in a letter on November 30, 2017.

- 31) The Regional Body and Compact Council identified in a letter on December 18, 2017 to the Wisconsin DNR that the change in water supplier from the City of Oak Creek to the City of Milwaukee was not a material change that affects the Declaration of Findings or the Council decision and no action was required from the Regional Body and Compact Council to make the change.
- 32) The City's return flow to the Root River, a Lake Michigan tributary, is as close as practicable to the place at which the water is withdrawn. (See Final EIS, 2019, appendix E, section 2.4 and section 4.4)
- 33) The water returned to Lake Michigan is from the Waukesha Wastewater Treatment Plant within the Mississippi River basin, which combines water from inside and outside the Great Lakes basin. (See DNR technical review section R4)
- 34) A Wisconsin Pollutant Discharge Elimination System permit, No. WI-0029971-09-0, was issued December 30, 2019, permitting the City of Waukesha to discharge effluent to the Root River.
- 35) The Waukesha wastewater treatment system will prevent the introduction of invasive species into the Great Lakes basin. (See DNR technical review section R4)
- 36) A Wetlands and Waterways permit, IP-SE-2018-68-N04503, N04505, N04506, was issued December 13, 2019 to the Waukesha Water Utility approving a stream crossing plan for the utility crossings of the waterways, the construction plans for the outfall structure on the Root River, and the final wetland and water restoration plans for construction implementing the diversion. An amendment to this permit was issued August 21, 2020 to address additional temporary wetland impacts from a change in the return flow alignment.
- 37) In its technical review, DNR found that if the City could meet permit requirements under Wis. Stat. §§ 30.12, 281.15, and 283.31, the physical, chemical, and biological integrity of the Root River would be protected and sustained. (See DNR technical review Section R5)
- 38) On November 19, 2020, the City submitted a monitoring program proposal that includes flow, water temperature, water quality, fish, macroinvertebrate and habitat monitoring. The proposal states that the monitoring will be completed under a Quality Assurance Project Plan and will utilize certified laboratories for all analyses.
- 39) On May 13, 2021, Waukesha submitted a plan to the DNR to reduce pharmaceuticals and personal care products in the City's wastewater based on the DNR's recommended best practices.
- 40) The proposed diversion from Lake Michigan will result in no significant individual or cumulative adverse impacts to the quantity or quality of the water and water-dependent natural resources of the Great Lakes basin. (See DNR technical review section IA1 and IA2; see also, Council Decision, Findings 8 and 10)
- 41) In 2019, the DNR completed a revised draft of the environmental impact statement and held a public hearing on the 2019 revised draft on August 20, 2019 at Carroll University, 100 N. East Avenue, Waukesha, WI 53186.
- 42) The DNR completed a final environmental impact statement and issued a determination of Wisconsin Environmental Policy Act Compliance for the city of Waukesha Proposed Great Lakes Diversion on December 13, 2019.
- 43) The DNR approved the City's Wastewater Facility Plan Amendment on February 11, 2019 and November 25, 2019.
- 44) The DNR approved the City's wastewater return flow pipeline from the Clean Water Plant to the Root River plans and specification on March 6, 2020, and November 16, 2020. The DNR approved the City's plans and specifications for phosphorus treatment improvements, return flow pump station and other alterations at the wastewater treatment facility site on February 24, 2020.
- 45) The PSC issued the City of Waukesha a Certificate of Authority authorizing the city to construct facilities to allow a change in the city's source of water supply from groundwater to Lake Michigan on March 10, 2020. This decision was reopened and modified on December 30, 2020.

- 46) The PSC issued the City of Milwaukee a Certificate of Authority authorizing the City of Milwaukee to construct facilities to allow for water transmission from the City of Milwaukee to the City of Waukesha on October 2, 2020.
- 47) The DNR approved the Water Supply Service Area Plan on June 29, 2021.
- 48) Water Transmission Main Plan and Specification Approvals (Project Numbers W-2020-0359, W-2020-0826, W-2020-0359A, W-2020-0866, W-2020-0882, W-2020-865, and W-2021-0003) were issued to the City of Waukesha and the City of Milwaukee for construction of the water transmission mains and associated infrastructure from the City of Milwaukee to the City of Waukesha on June 18, 2020, November 19, 2021, January 8, 2021, February 5, 2021, February 8, 2021, and March 26, 2021.
- 49) The U.S. Army Corps of Engineers issued a permit to the City of Waukesha on September 9, 2020 authorizing temporary and permanent discharge of dredge and fill material for the construction of a water supply and return flow system.
- 50) The Wisconsin Department of Transportation issued permits to construct, operate, and maintain utility facilities on highway right of way to the City of Waukesha for a water supply and return flow system to the City of Waukesha in permit number 001234 on December 14, 2020 and in permit number 67U-01-21 on January 4, 2021, updated January 15, 2021.
- 51) The proposed diversion is in compliance with the Boundary Waters Treaty of 1909 because any water lost from the basin (due to consumptive use) would not affect the flows or levels of the boundary waters on either side of the border. Therefore, the proposed diversion is not subject to regulation by the International Joint Commission. (See DNR technical review section AC2; see also, Council Decision, Finding 9)

CONCLUSIONS OF LAW

DNR concludes that:

- 1) The City's diversion application complies with the requirements of Wis. Stat. § 281.346(4)(b).
- 2) The Waukesha Water Utility operates a "public water system," as defined in Wis. Admin. Code § NR 811.02(56), that would receive water from the proposed diversion.
- 3) The City is a "community within a straddling county," as defined in Wis. Stat. § 281.346(1)(d).
- 4) The proposed diversion is governed by the requirements of Wis. Stat. § 281.346(4)(e) because the proposal is to provide a public water supply to a "community within a straddling county."
- 5) The proposed diversion is for "public water supply" purposes, as defined in Wis. Stat. § 281.346(1)(pm) (see also, Wis. Stat. § 281.343 (1e)(pm)) and as required in Wis. Stat. § 281.346(4)(e)1.
- 6) The proposed diversion complies with the requirements of Wis. Stat. § 281.346(4)(e)1.a., because the City is without adequate supplies of potable water.
- 7) The diversion complies with the requirements of Wis. Stat. § 281.346(4)(e)1.b., because the proposal meets the exception standard under Wis. Stat. § 281.346(4)(f).
- 8) The proposed diversion complies with the requirements of Wis. Stat. § 281.346(4)(e)1.c., because the proposal maximizes the amount of water withdrawn from the Great Lakes basin that will be returned to the source watershed and minimizes the amount of water from outside the Great Lakes basin that will be returned to the source watershed.
- 9) The proposed diversion complies with the requirements of Wis. Stat. § 281.346(4)(e)1.d., because there is no reasonable water supply alternative within the basin in which the community is located, including conservation of existing water supplies.

- 10) The proposed diversion complies with the requirements of Wis. Stat. § 281.346(4)(e)1.e., because the proposal will not endanger the integrity of the Great Lakes basin ecosystem based upon a determination that the proposal will have no significant adverse impact on the Great Lakes basin ecosystem.
- 11) The proposed diversion complies with the requirements of Wis. Stat. § 281.346(4)(e)1.em., because the proposal is consistent with an approved water supply service area plan under Wis. Stat. § 281.348 that covers the public water supply system.
- 12) The DNR conducted a technical review of the diversion proposal, as required by Wis. Stat. § 281.346(4)(e)1.f.
- 13) The DNR notified the regional body of the diversion proposal, as required by Wis. Stat. § 281.346(4)(e)1.g.
- 14) The proposal underwent regional review, as required by Wis. Stat. § 281.346(4)(e)1.h.
- 15) The DNR considered the regional declaration of findings in determining whether to approve the proposal, as required by Wis. Stat. § 281.346(4)(e)1.i.
- 16) The proposal was approved by the Great Lakes council, as required by Wis. Stat. § 281.346(4)(e)1.j.
- 17) DNR has given substantive consideration to whether the City has provided sufficient scientifically based evidence that its existing water supply is derived from groundwater that is hydrologically interconnected to waters of the Lake Michigan Basin, as required by Wis. Stat. § 281.346(4)(e)2.
- 18) The proposed diversion cannot reasonably be avoided through the efficient use and conservation of existing water supplies (as determined under Wis. Admin. Code ch. NR 852), as required by Wis. Stat. § 281.346(4)(f)1.
- 19) The diversion is limited to quantities that are reasonable for the purposes for which the diversion is proposed, as required by Wis. Stat. § 281.346(4)(f)2.
- 20) An amount of water equal to the amount of water withdrawn from the Great Lakes basin will be returned to the source watershed, less an allowance for consumptive use, as required by Wis. Stat. § 281.346(4)(f)3.
- 21) Treated wastewater will be returned to the source watershed as close as practicable to the place at which the water is withdrawn, as required by Wis. Stat. § 281.346(4)(f)3m.
- 22) The returned water meets the criteria of Wis. Stat. § 281.346(4)(f)4. The returned water is from a wastewater treatment system that combines water from inside and outside the Great Lakes Basin, as required by Wis. Stat. § 281.346(4)(f)4.a. The returned water will be required to meet applicable water quality discharge standards under Wis. Stat. § 283.31 and to prevent the introduction of invasive species into the Great Lakes basin, as required by Wis. Stat. § 281.346(4)(f)4.b. The returned water will also be returned through a structure that meets the applicable permit requirements under Wis. Stat. § 30.12, as required by Wis. Stat. § 281.346(4)(f)4.c.
- 23) The water returned to the Great Lakes basin through the Root River will protect the physical, chemical, biological integrity of the Root River as required under Wis. Stat. §§ 30.12, 281.15, and 283.31, and considering the factors required by Wis. Stat. § 281.346(4)(f)4m.
- 24) The diversion will not have any significant adverse impacts on the sustainable management of the water of the Great Lakes basin and will result in no significant adverse individual impacts or cumulative impacts to the quantity or quality of the waters of the Great Lakes basin or to water dependent natural resources, as required by Wis. Stat. § 281.346(4)(f)5.
- 25) The City is committed to implementing the applicable water conservation measures (as determined under Wis. Admin. Code ch. NR 852) that are environmentally sound and economically feasible for the City, as required by Wis. Stat. § 281.346(4)(f)6.
- 26) The City's submitted Water Conservation and Efficiency Plan meets the requirements of Wis. Admin. Code § NR 852.07, promulgated pursuant to Wis. Stat. § 281.346(8).

- 27) DNR complied with the public notice and comment and public hearing procedures set forth in Wis. Stat. § 281.346(9).
- 28) The DNR complied with the requirements of Wis. Stat. § 1.11 and Wis. Adm. Code ch. NR 150.
- 29) As required by Wis. Stat. § 281.348(3)(cr), the City's water supply service area is amended from the proposed water supply service area in the application to be the diversion area specified in the Council Decision.

APPROVAL

The DNR, pursuant to its authority in Wis. Stat. § 281.346(4), hereby approves the City's proposal to divert Lake Michigan water to an area outside of the Great Lakes basin, and approves the water conservation plan, as outlined in the City's Diversion Application. This approval is subject to the terms and conditions described in this approval.

- 1) The City must implement the Diversion in accordance with the overarching principles of the Compact. (Condition A)
- 2) The City must comply with all conditions of the Council Decision (Appendix B). (Condition K)
- 3) The City must obtain any additional site-specific approvals that may be required to complete the construction of the diversion and must be in and maintain compliance with all applicable local, state, and federal laws and interstate and international agreements, including the Boundary Waters Treaty of 1909. Wis. Stat. § 281.346(4)(f)7. (Condition K)
- 4) The City may serve diverted water only in the Approved Diversion Area as defined by the Council Decision. No part of the diversion may be used for any territory outside of the diversion area specified in Attachment 1 to the Council Decision. (Appendix B). (Condition B)
- 5) **Approved Diversion—Purpose and Maximum Amount**
The City shall only use Lake Michigan water diverted pursuant to this approval solely for "public water supply" purposes, as defined in Wis. Stat. § 281.346(1)(pm), in the approved diversion area. The DNR approves a maximum diversion amount of 8,200,000 gallons per day averaged over a calendar year as approved in the Council Decision (Appendix B). (Condition B)
- 6) **Conservation and Efficiency Plan**
The Conservation and Efficiency Plan submitted by the City meets all requirements outlined in Wis. Admin. Code Ch. NR 852 and is hereby approved.

The City must implement and enforce all elements of its approved water conservation and efficiency plan, (and any future revisions) in the diversion area in order to meet or exceed, if possible, a 10% demand reduction from projected water use due to the implementation of the water conservation and efficiency plan.

The City must update the plan by December 31, 2022 and at least every 10 years. The updated plan must meet all requirements outlined in Wis. Admin. Code ch. NR 852. (Condition C)

7) Deep Aquifer Wells

Effective on the date the diversion begins, the City shall maintain deep aquifer groundwater wells only for emergency use and shall use them only for the duration of the emergency, as allowed under Wis. Admin. Code § NR 810.22. (Condition D)

8) Monitoring Diversion amounts

The approved diversion amount shall be monitored by the City by measuring water purchased from the City of Milwaukee. The City shall accurately report to DNR the amount of water diverted to the Mississippi River Basin, as specified in section 12 below.

The City shall assign each water utility customer within the approved diversion area to one of the PSC categories of water user.

The City shall maintain records of monthly sales to each water customer within the approved diversion area. The City shall read all meters within four weeks of the close of each billing cycle. The City may reassign a customer to another category to reflect water user changes.

Each new customer the City adds outside of the Great Lakes basin will be identified as such in the city's records to monitor and record all sales or delivery of water to the diversion area. (Condition J)

9) Reducing Pharmaceutical and Personal Care Products Recycling and Impacts

Effective on the date the diversion begins, the City shall implement a comprehensive pharmaceutical and personal care products recycling and reduction program and continually use the best available methods to encourage the further reduction of such products into the wastewater as recommended by the DNR.

The DNR anticipates that modifications to the pharmaceutical and person care products reduction program are likely as best management practices change.

The City shall submit proposed changes to the plan to reduce pharmaceuticals and personal care products in the City's wastewater to the DNR at least 30 days prior to implementation. If, within 30 days of submittal, the DNR objects in writing to the proposed changes, the City may not implement the change until the objection is resolved. (Condition G)

10) Return Flow to the Root River

Effective on the date the diversion begins, the City must return to the Root River, a Lake Michigan tributary, a daily quantity of treated wastewater equivalent to or in excess of the previous calendar year's average daily Diversion volume. On any days when the total quantity of treated wastewater is insufficient to meet or exceed the previous calendar year's average daily diversion volume, all treated wastewater must be returned to the Root River.

Discharge from the Waukesha Wastewater Treatment Plant to Lake Michigan is required to meet all applicable WPDES permit requirements under Wis. Stat. § 283.31 and to prevent the introduction of invasive species into the Lake Michigan basin. All water returned from the diversion area to the Lake Michigan basin will be routed through and treated by the Waukesha Wastewater Utility.

The City shall monitor return flow from the diversion area. The City shall monitor return flow to the Lake Michigan basin via a flow meter at the Waukesha Wastewater Treatment Plant. The City shall

monitor wastewater discharge to the Fox River via a flow meter at the wastewater treatment plant. (Condition H)

Except as authorized by the DNR to address a drinking water public health emergency, any additional water supply customers that receive water after the date of this approval in the diversion area must simultaneously connect to sewer service with return to the Waukesha Wastewater Treatment Plant.

11) Root River Monitoring

Effective on the date the diversion begins, the City shall implement a scientifically sound plan to monitor the mainstem of the Root River to determine changes that may have resulted from return flow (such as volumes, water temperatures, water quality, and periodicity of discharge) in order to adapt future return flow to minimize potential adverse impacts or maximize potential benefits to water dependent resources of Lake Michigan. The City shall monitor the Root River for potential impacts to Root River in accordance with the City's monitoring program proposal and the Quality Assurance Program Plan.

At least 90 days prior to beginning the diversion, the City shall submit a Monitoring Plan with Quality Assurance Program Plan procedures consistent with the monitoring program proposal. The Quality Assurance Program Plan shall specify the locations of sampling, methodology for sample collection, handling and analysis and monitoring data reporting and evaluation procedures. All samples collection and analyses shall be performed using accepted and standard procedures as approved by the DNR. Laboratories conducting the analyses shall be certified or registered in accordance with Ch. NR 149, Wis. Admin. Code. All data collected will be entered into the DNR's SWIMS database or equivalent database that houses data to be available for the public. The quality assurance/quality control documents shall specify provisions for regular maintenance of all monitoring devices, to ensure that such devices remain in proper working condition.

The City shall implement the Monitoring Plan with the Quality Assurance Program Plan unless, within 30 days of submittal, the DNR objects in writing that the City's Plan does not assure compliance with Condition I of the Council Decision. If the DNR objects in writing, the City may not begin the diversion until the objection is resolved.

The City shall implement the Monitoring Plan and Quality Assurance Program Plan for at least 10 years from the date of this approval. The DNR may require monitoring to extend beyond 10 years, depending on monitoring results.

The DNR anticipates that modifications to the monitoring program proposal and the Quality Assurance Program Plan are likely over the required monitoring period as initial results from the monitoring program may inform scientifically sound adjustments to monitoring parameters, locations, frequency, and timing.

The City shall submit proposed changes to the Monitoring Plan or the Quality Assurance Program Plan to the DNR at least 30 days prior to implementation. If, within 30 days of submittal, the DNR objects in writing to the proposed changes, the City may not implement the change until the objection is resolved. (Condition I)

12) Reporting

The City shall submit to the DNR an annual report consistent with the requirements of Condition J of the Council Decision. This report must be made available to the public on the City's webpage.

On or before March 1st, on an annual basis, the City shall report to DNR the following information for the prior calendar year:

- a) The City shall summarize that the diversion was implemented consistent with the requirements of the Council Decision.
- b) 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.
- c) The total amount of water sold monthly, to each category of customer within the approved diversion area.
- d) 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.
- e) The total consumptive use as defined in Wis. Stat. §281.346(1)(e).
- f) A summary of the impact of the implemented Conservation and Efficiency Measures required under Wis. Admin. Code §§ NR 852.04 and NR 852.05, including quantifiable impacts to water use intensity, as defined in Wis. Admin. Code § NR 852.03(29). Water use intensity metric calculation methods as specified by the DNR.
- g) A description of any additional Conservation and Efficiency Measures implemented.
- h) A statement verifying that no customers outside of the diversion area were sold Lake Michigan water.
- i) A spatially explicit description of the properties served by the City's water utility, in the manner prescribed by the DNR.
- j) 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.
- k) A summary of the implementation of the pharmaceutical and personal care products recycling and reduction program in the past year.
- l) 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.
- m) A statement of compliance with all applicable federal and state permits and approvals.

13) The City shall allow an authorized representative of the DNR, upon presentation of credentials, to do all the following:

- a) Enter, upon reasonable notice, the owner's premise where records are kept.
- b) Have access to and copy, at reasonable times, any records that are required to be kept under this approval.
- c) Inspect at reasonable times any facilities, equipment, including monitoring and control equipment, practices or operations regulated or required under this approval.

14) For as long as the City of Waukesha withdraws Basin water pursuant to this approved diversion, the City of Waukesha upon 30 days advance written notice shall allow the Compact Council or any Compact Party to conduct an inspection and audit of the City of Waukesha operations. (Condition L)

15) Non-Compliance

If the City fails to comply with the terms and conditions of this approval, the City is subject to the penalty provisions in Wis. Stat. § 281.346(14).

16) Revisions

If the City proposes to revise the approved diversion amount, the approved diversion area, or any other term or condition of the approval, the City shall apply to DNR for approval, in accordance with the requirements in Wis. Stat. § 281.346(4), any administrative rules promulgated by the DNR to implement this statute, and in accordance with the Great Lakes—St. Lawrence River Basin Water Resources Compact.

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James Zellmer, Deputy Division Administrator
Division of Environmental Management

Date

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

Date

Appendix A – Application materials

Supplemental application materials:

Date	Title
May 2010	Waukesha Application for a Lake Michigan Water Supply
March 2011	Waukesha Water Conservation Report Submitted to PSC
April 2011	Response to DNR Questions from December 2010
May 2011	Letter from Waukesha Water Utility Manager Dan Duchniak Re: additional Water Conservation Information
February 2012	City of Waukesha Water Supply Environmental Report
May 2012	Adopted Water Conservation Plan
August 2012	Memo to Eric Ebersberger, Water Use Section Chief from Brad Eggold concerning "Water return to Root River from City of Waukesha"
November 2012	Oak Creek/Waukesha Letter of Intent
November 2012	Exhibit B of Oak Creek/Waukesha Letter of Intent
March 2012	City of Waukesha Lake Michigan Water Supply Application Technical Review of the Cost Estimate
Feb 4, 2013	Waukesha Water Utility Groundwater modeling – RJN Environmental Services
Jul 26, 2013	RJN Groundwater Modeling Report
Jul 26, 2013	RJN Groundwater Modeling Report Tables
Aug 30, 2013	Waukesha Water Utility Groundwater modeling – RJN Environmental Services
Jan 15, 2014	Appendix E, Volume 2, Cost estimates – revised
Feb 18, 2014	Technical Memorandum – Environmental Impacts of a Lower Water Demand
Feb 19, 2014	Technical Memorandum – Water Demand Projections
Mar 25, 2014	DNR Questions on Lower Water Demands Memo
Apr 10, 2014	Attachment D Revised – DNR Questions on Lower Water Demand Memo
Apr 28, 2014	Technical Memorandum – Supplemental Public Health and Environmental Information on Waukesha Water Supply Alternatives – Part 1
Apr 28, 2014	Technical Memorandum – Supplemental Public Health and Environmental Information on Waukesha Water Supply Alternatives – Part 2
Jan 6, 2015	Return Flow Exhibit (this includes Alternative 6, returning up to 10.1 MGD)
Feb 10, 2015	Summary of Lake Michigan Nearshore Water Quality for EIS
Feb 12, 2015	"No Action Alternative" memo related to EIS
Feb 19, 2015	Costs associated with Direct to Lake Michigan Return Flow Option
Feb 19, 2015	Air Quality Clarification memo for EIS
Feb 20, 2015	Summary of Wetland Impacts (related to pipeline for EIS)
Feb 20, 2015	Additional information for EIS for river and stream impacts (51 pages)
Mar 6, 2015	South Shore Outfall return costs (return)
Mar 6, 2015	South Shore Outfall return costs (total costs)
Mar 10, 2015	Waukesha Return to MMSD (South Shore Outfall details and EIR addendum)
Mar 23, 2015	New Hydraulic modeling tables related to 10.1 MGD return to the Root River
Apr 2, 2015	Waukesha Memo on Thermal

May 26, 2015	Draft Memorandum – Antidegradation Evaluation for City of Waukesha
Oct 28, 2015	Reverse Osmosis Concentrate Disposal Issues
Nov 3, 2015	Conservation Plan Update
Nov 25, 2015	Predicting Future Water Levels in the Sandstone Aquifer of Southeastern Wisconsin

Appendix B - Council Decision

June 21, 2016

**BEFORE THE GREAT LAKES-ST. LAWRENCE RIVER BASIN
WATER RESOURCES COUNCIL**

**In the Matter of the Application by the City
of Waukesha, Wisconsin for a Diversion of
Great Lakes Water from Lake Michigan and
an Exception to Allow the Diversion**

No. 2016-1

FINAL DECISION

I. Introduction and Background

- 1. Summary of the Application.** The City of Waukesha, Wisconsin (“Applicant”) applied for a New Diversion of Lake Michigan water from the Great Lakes-St. Lawrence River Basin (“Basin”) to serve the territory in the Waukesha water supply service area established under Wisconsin law. The Applicant requested to divert up to 10.1 million gallons per day (“MGD”) annual average day demand (“ADD”) of Basin water for this water supply service area, based on a projected average daily demand for the water supply service area at full build-out (approximately 2050) (“Application”).
- 2. Legal Basis for Submission of Application for a Diversion of Great Lakes Water.** Pursuant to Article 201 ¶ 3 of the Great Lakes—St. Lawrence River Basin Sustainable Water Resources Agreement (“Agreement”) and § 4.9.3 of the Great Lakes—St. Lawrence River Basin Water Resources Compact (“Compact”),¹ the State of Wisconsin, as the Originating Party, forwarded the Applicant’s Application for an exception to the prohibition of Diversions as a Community within a Straddling County on January 7, 2016 to the Great Lakes—St. Lawrence River Water Resources Regional Body (“Regional Body”) and the Great Lakes—St. Lawrence River Basin Water Resources Council (“Compact Council”) for Regional Review. The Originating Party provided a Technical Review, preliminary final Environmental Impact Statement, and the Application to the Regional Body and Compact Council for consideration.
- 3. Originating Party and Applicant Review Process.** The Originating Party has represented to the Regional Body that the Applicant held four informational meetings consisting of a presentation and questions and answers on a previous version of the Application submitted to the Originating Party in 2013. In addition, the Originating Party has represented to the Regional Body that it: (i) held three public comment periods in 2011, 2013, and 2015, and two sets of public hearings on various versions of the Application in 2011 and 2015 for a total of six public hearings prior to completing its technical review; (ii) considered public comments received during the public comment periods and hearings; (iii) provided opportunities for Tribal consultation via

¹ Capitalized terms used in this Final Decision that are not defined in this Final Decision shall have the meanings ascribed to them in the Agreement and the Compact.

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conference calls with Wisconsin Tribes on July 25, 2011 and July 14, 2015; and, (iv) although not required by the Compact, elected to follow the Environmental Impact Statement procedures under Wisconsin's Environmental Policy Act, with public participation.

4. **Regional Review Process.** In fulfillment of the Agreement and the Interim Procedures under the Agreement, as adopted on June 10, 2010, and the Compact and the Interim Guidance under the Compact, as adopted on June 10, 2010, the public as well as the Regional Body and Compact Council members were notified that the Application was submitted to the Regional Body and Compact Council for Regional Review on January 7, 2016. An opportunity for the public to comment on the Application was opened from January 12, 2016 to March 14, 2016. The Regional Body and Compact Council also notified the Tribes and First Nations that it had received an Application for a Diversion of Basin water and requested comments.

In addition, on February 17, 2016, the Regional Body and Compact Council toured sites in southeastern Wisconsin related to the Application, and in a face-to-face meeting in Waukesha, Wisconsin, asked a series of questions of the Wisconsin Department of Natural Resources and the Applicant regarding the Application. Furthermore, on February 18, 2016, the Regional Body and Compact Council held a meeting with Canadian First Nations and federally recognized U.S. Tribes, followed by a public meeting and hearing on the application in Waukesha, Wisconsin at which the public was provided an opportunity to provide comments to the Regional Body and Compact Council members.

The Originating Party received and answered questions on the technical review from six jurisdictions (Illinois, Michigan, Minnesota, New York, Ohio and Quebec) and the Originating Party responded to all questions submitted. The answers to questions were provided to the Regional Body and Compact Council. Two jurisdictions (Michigan and Ontario) submitted their own technical reviews to the Regional Body and Compact Council on March 22, 2016.

A public meeting of the Regional Body was held for the purpose of considering its Declaration of Finding, commencing on April 21-22, 2016 in Chicago, Illinois, and which was recessed to a May 2, 2016 meeting via webinar, which in turn was recessed to a public meeting held on May 10-11, 2016 in Chicago, and further recessed to a May 18, 2016 meeting via webinar. On May 18, 2016, the Regional Body approved its Declaration of Finding.

On May 20, 2016, the Regional Body and Compact Council notified the Regional Body and Compact Council members, the Applicant, the public, and Canadian First Nations and federally recognized U.S. Tribes that the Regional Body had issued its Declaration of Finding, and included with these notices a copy of the approved Declaration of Finding.

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5. **Additional Compact Council Process.** On May 20, 2016, the Compact Council provided public notice as well as notice to the Tribes and First Nations that a Compact Council meeting would be held to consider the Application and the Regional Body's Declaration of Finding on the Application, in order to render a Compact Council decision on the Application. The Compact Council held a public meeting for these purposes on June 21, 2016 in Chicago, Illinois.
6. **Record of Decision.** The Regional Body and Compact Council jointly established the website www.waukeshadiversion.org to make all information, including all Application materials, transcripts of meetings, public comments, calendar of events, public notices, and other relevant information available to the public. All such materials together shall be considered the record of decision. In addition, paper copies of all materials are available for public inspection at the office of the Secretariat to the Regional Body.

II. Findings

After reviewing the Application, as well as Declaration of Finding and the materials in the record of decision, to determine whether the Application meets the Compact criteria related to the ban on Diversions and the Exception criteria for a Diversion to a Community within a Straddling County, the Compact Council makes the following findings. The bases for these findings as listed below are intended to highlight major reasons for reaching these findings without containing an exhaustive listing of every basis in the record that supports each finding.

1. **Community in a Straddling County.** The Applicant is located wholly outside the Basin and wholly inside Waukesha County, Wisconsin. Waukesha County straddles the Lake Michigan watershed boundary; therefore, the Applicant is a Community within a Straddling County. (Compact § 1.2)
2. **Water to Be Used for Public Water Supply.** The Applicant owns the Waukesha Water Utility, a public water supply system, and the Applicant has requested the use of the water solely for Public Water Supply Purposes. Public Water Supply Purposes means "water distributed to the public through a physically connected system of treatment, storage and distribution facilities serving a group of largely residential customers that may also serve industrial, commercial, and other institutional operators. Water Withdrawn directly from the Basin and not through such a system shall not be considered to be used for Public Water Supply Purposes." (Compact § 4.9.3.a)
3. **Applicant Without Adequate Supplies of Potable Water.** The Applicant is without adequate sustainable supplies of potable water. (Compact § 4.9.3.a)
 - 3a. The Applicant's deep aquifer wells draw from an aquifer that is part of a regional aquifer system where withdrawals have exceeded the natural recharge rate. A cone of depression in the deep aquifer centered in eastern Waukesha County is attributable in large part to withdrawals from the Applicant's deep aquifer wells.

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Continued pumping at rates in excess of recharge rates is not sustainable. Even at lower pumping rates, water levels are still approximately 350 feet below pre-development water levels. The Applicant does not control the overall use of the regional aquifer system; however, the Southeastern Wisconsin Regional Planning Commission (“SEWRPC”) water supply plan has recommended reducing water utility reliance on this deep aquifer. Cessation of the Applicant pumping from the deep aquifer is anticipated to result in additional recovery of the deep aquifer system.

3b. The Applicant’s deep aquifer wells also have total combined radium (radium-226 and radium-228) concentrations that are above the Safe Drinking Water Act standard of 5 picocuries per liter (pCi/L). The Applicant’s current system of blending deep aquifer water with shallow water and treating some deep aquifer water still does not meet state drinking water standards. Furthermore, the Applicant is under a court order to address the naturally occurring radium contamination and comply with all state and federal drinking water radionuclide standards by June 30, 2018.²

3c. The groundwater depletion, along with the radium contamination issue, demonstrates that the deep aquifer is not a sustainable or safe source of water for the people served by the Applicant. Eliminating the Applicant’s withdrawal from the deep aquifer will eliminate the extraction and redistribution of radium by the Applicant from the deep aquifer through releases from treatment processes, disposal of wastewater treatment byproducts and/or dispersion of residual radium into the environment through incomplete treatment.

- 4. Applicant Without Reasonable Water Supply Alternative.** All of the Applicant’s water supply alternatives within the Mississippi River Basin (“MRB”) are likely to have, and cannot be sustained without, greater adverse environmental impacts than the proposed diversion. The Compact Council further finds, as stated in several Findings including 4a, 4b, 7b, 8c, 8e, and 11a, that the diversion as conditioned in this Final Decision does not have significant adverse impacts in the Basin. In addition, none of the evaluated MRB alternatives were found to be reliable sources for a long-term, dependable, and sustainable public water supply and, therefore, the Applicant is without a reasonable water supply alternative. (Compact § 4.9.3 and 4.9.3.d)

4a. It is the obligation of the Applicant to provide its customers with a safe, reliable water supply. The Applicant and Originating Party screened fourteen potential MRB water supply alternatives and analyzed in-depth six water supply alternatives. Environmental review conducted by the Originating Party considered a demand production of 8.5 MGD ADD for modeling purposes, which is lower than the Application request of 10.1 MGD ADD. This demand is the low end of the range presented by the Applicant.³ The Compact Council finds that the difference in an

² State of Wisconsin v. City of Waukesha, Case No. 2009-CX-4 (Wis. Cir. Ct. Waukesha Cnty. Apr. 9, 2009).

³ Originating Party Technical Review, Section S2C. Environmental Impacts.

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environmental projection analysis at 8.5 MGD ADD versus 8.2 MGD ADD is within the margin of error for the model, and would not change the expectation of significant adverse impacts to wetlands or lakes. The environmental analyses of water supply alternatives that included use of the shallow aquifer near the Fox River predicted significant adverse impacts to hundreds of acres of wetlands. An analysis of a water supply alternative using the unconfined deep aquifer west of the City of Waukesha predicted significant impacts to several seepage lakes, including a 6 to 12 inch decrease in lake levels and a greater than 10% decrease in groundwater inflow to these lakes. These modeled impacts indicate that the evaluated sources within the MRB are unreliable and not sustainable without adverse environmental impacts.

Public water suppliers have a responsibility to meet public health and safety needs to the best of their ability. The Originating Party also determined that none of the MRB water supply alternatives is as protective of public health as the proposed Lake Michigan water supply, because of greater risk for contamination.⁴

4b. None of the water supply alternatives that relies on treating the radium-contaminated water pumped from the deep aquifer prevents extraction and redistribution of radioactive waste into the environment, whether by land application of Waste Water Treatment Plant (“WWTP”) sludge, landfilling of waste byproducts or release of residual radium levels into the WWTP-receiving waters. All such alternatives are, therefore, not reasonable or sustainable for this Applicant at these volumes over the long term and present potential current and future avoidable risks to the environment and human health.

4c. Groundwater flow models have demonstrated a direct interconnection between the deep confined aquifer from which the Applicant withdraws groundwater and the Basin. The U.S. Geological Survey (“USGS”) and the Wisconsin Geological and Natural History Survey (“WGNHS”) have estimated⁵ that about 30% of the replenishment of the water withdrawn by the Applicant’s deep wells originates from the Lake Michigan watershed. Water from the Lake Michigan watershed is then discharged into the MRB via the Fox River.

4d. The Compact requires Adaptive Management approaches to conservation and management of Basin Water resources (Compact § 1.3.2.h) and application of a scientific basis for sound decision making. (Compact § 1.4) USGS and WGNHS concluded⁶ that the shallow groundwater aquifer and deep groundwater aquifer are interconnected across the surface water divide. This is illustrated by figure 23 in the Originating Party’s Technical Review. The demonstrated hydrological interconnection has a scientific basis and creates a nexus between the Basin and the MRB that supports the consideration of adverse environmental impacts (*see* Section

⁴ Originating Party Technical Review, Section S2B. Public Health.

⁵ Originating Party Technical Review, Section AC1.

⁶ SEWRPC Simulation of Regional Groundwater Flow in Southeastern Wisconsin, Report 1 and 2, Technical Report #41 (06/2005).

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II.11 below) on the MRB when analyzing the request for a Diversion from the Lake Michigan watershed.

4e. The Applicant's deep aquifer wells induce water from the Lake Michigan watershed to replenish groundwater withdrawn by the Applicant. These wells withdraw water that, without the withdrawals, would have flowed toward Lake Michigan and instead, after use, is discharged to the Fox River without return flow.

5. Proposed and Conditioned Diversion Amount and Area. The Application requests a Diversion amount of 10.1 MGD as an ADD to meet projected demand at full build-out (approximately 2050) for the Waukesha water supply service area established under Wisconsin law. Compact Section 4.9.3.a requires that the proposed diversion must be used solely for the Public Water Supply Purposes of a "Community within a Straddling County." The Compact Council finds that the diversion area set forth in the original Application did not clearly meet Compact criteria. The Compact Council further finds that the Approved Diversion Area (defined below) set forth in Attachment 1 is the equivalent of a city or town and meets the Compact definition of a Community within a Straddling County as set forth in Compact Section 1.2 for the reasons set forth in paragraph II.5.b of these Findings. The Compact Council finds that the Diversion amount that is consistent with the Compact is 8.2 MGD as an annual ADD to meet the projected demands ("Approved Diversion Amount") within the Approved Diversion Area (defined below), subject to the conditions contained in this Final Decision, including, without limitation, those listed in Section III.2 below. The Compact Council finds that this Approved Diversion Amount and Approved Diversion Area are appropriately limited in quantity and area and are considered reasonable for the purposes for which the Diversion is proposed. (Compact § 4.9.4.b)

5a. The Applicant's public water supply system is the only public water provider to be served by the Diversion.

5b. The Applicant may provide water supply service to the following areas, each of which are part of the Diversion area described and depicted in Attachment 1 attached to and made a part of this Final Decision (collectively, the "Approved Diversion Area"). The limits of this Approved Diversion Area are fixed as of May 18, 2016:

- i.** Incorporated land within the boundaries of the City of Waukesha and land outside the City of Waukesha's jurisdictional boundaries that is served with municipal water by the Applicant through the Waukesha Water Utility as of May 18, 2016. This land is referred to as the "Current Area Served" (and colored in dark blue) on Attachment 1; and,
- ii.** Land lying within the perimeter boundary of the City of Waukesha that is part of unincorporated land in the Town of Waukesha. These areas are referred to as the "Town Islands" (and colored in light blue) on Attachment 1. The Town Islands are transected or bordered by a Waukesha Water Utility water main and are either fully surrounded by

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territory incorporated in the City of Waukesha or are bordered on one side by a transportation right-of-way and on the remaining sides by territory incorporated in the City of Waukesha. For the purposes of defining the Approved Diversion Area, the Town Islands have been included because for all practical purposes they are within the Applicant's community boundaries.

- 6. Proposed Diversion Cannot Be Avoided Through Water Conservation and Efficiency.** The proposed Exception cannot be reasonably avoided through the efficient use and conservation of existing water supplies and the Exception will be implemented to incorporate environmentally sound and economically feasible water conservation measures to minimize water withdrawals. (Compact § 4.9.4.a and 4.9.4.e)

6a. The Applicant has implemented a water conservation program consistent with the Originating Party's state law. The Approved Diversion Amount found to be consistent with the Agreement and Compact in Section II.5 (8.2 MGD) assumes a ten percent demand reduction due to conservation and efficiency measures. The Applicant used the Alliance for Water Efficiency Conservation Tracking Tool and projected that at full system build-out, it would achieve 1.0 MGD in conservation savings. With the Compact Council's determination of the Approved Diversion Amount, this corresponds to 0.8 MGD in conservation savings.⁷

- 7. Maximize Return of Great Lakes Water and Minimize Discharge of Mississippi River Basin Water to Great Lakes.** The Applicant will return up to the previous year's average daily withdrawal amount per day and, therefore, a volume of water approximately⁸ equal to the volume of water withdrawn from Lake Michigan will be returned to the Lake Michigan watershed.⁹ The Applicant will maximize the portion of water returned to the source watershed (Lake Michigan watershed) and will minimize the water from outside the Lake Michigan watershed that is returned to the Basin.¹⁰ Returned water will be required to meet Clean Water Act water quality discharge standards and prevent the introduction of invasive species into the Basin. (Compact § 4.9.3.b and 4.9.4.c)

7a. Through the Applicant's proposed return flow management plan, approximately 100% of the volume withdrawn from the Basin will be returned via flow through the Root River, a tributary of the Basin. This effectively results in no net loss of water volume to the Basin.

7b. The changes in the characteristics of the flow within the Root River, while potentially creating some negative changes for certain aquatic and benthic organisms, is expected to provide an overall net benefit to the Root River and the Lake Michigan watershed, including stabilizing river flows to reduce low flow

⁷ Originating Party Technical Review, Sections C1 and C2.

⁸ Originating Party Technical Review, Section R1 and R2.

⁹ Originating Party Technical Review, Sections R1 and R2.

¹⁰ Originating Party Technical Review, Section R4.

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periods and improving spawning conditions for salmonids to the Wisconsin Department of Natural Resources (“WDNR”)¹¹ Root River Steelhead Facility.¹²

- 8. No Significant Individual or Cumulative Impacts.** The Diversion will be implemented to ensure that it will result in no significant individual or cumulative adverse impacts to the quantity or quality of the Waters and Water Dependent Natural Resources of the Basin with consideration given to the potential cumulative impacts of any precedent-setting consequences associated with the Application. (Compact § 4.9.3.e and 4.9.4.d)

8a. The antidegradation procedures in ch. NR 207 of the Wisconsin Administrative Code will be implemented to ensure the antidegradation standard in s. NR 102.05(1) is met. The Wisconsin Pollutant Discharge Elimination System (“WPDES”) permit terms and conditions and the application of antidegradation procedures will ensure that the diversion will comply with water quality standards in the receiving water and downstream waters (Lake Michigan). Chapter NR 207 requires a demonstration of at least one improvement to economic or social development and a Lake Michigan water supply with resulting return flow would provide several improvements. For example, it would correct a public health problem (radium contamination) by providing clean, safe and sustainable water in a manner that protects environmental, economic, and social health. WPDES permit terms and conditions will reflect applicable source reduction and pollution minimization practices and meet all applicable water quality standards. Additionally, the WDNR will ensure that the discharge is located in such a way to lessen any potentially deleterious environmental impacts as practicable.¹³

8b. The Originating Party and the Applicant, as part of their review of the Application, took into consideration the Regional Body and Compact Council’s “Cumulative Impact Assessment of Withdrawals, Consumptive Uses and Diversions: 2006-2010” that was released on December 4, 2013.

8c. A Diversion of Basin water will eliminate land-spreading of WWTP sludge that contains radium, and eliminate the introduction of radium into the environment from the City of Waukesha WWTP.

8d. Reduced withdrawals from the deep aquifer will support long-term recovery of that aquifer. The trend for groundwater levels to continue to recover may also contribute to the reduction of radium concentrations within the upper levels of the deep aquifer.¹⁴

¹¹ All references to future actions by, or submissions to, the Wisconsin Department of Natural Resources shall mean and include any future successor to its responsibilities that are the subject of this Declaration of Finding.

¹² Originating Party Preliminary Final EIS, Section 4.4.2.3.1.7.

¹³ See Application, Volume 4.

¹⁴ See Application, Volume 2.

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8e. The return of Basin water via the Root River is projected to provide a net environmental benefit to the Root River while simultaneously producing no loss of biological integrity to Lake Michigan.

8f. Eliminating the Applicant's withdrawal from the deep aquifer system will reduce the amount of groundwater lost from the Lake Michigan watershed without return flow (*see* Section II.11 below).

8g. The Applicant will be returning approximately 100% of the water Withdrawn.

8h. The return flow will meet the Originating Party's and federal permit requirements, providing high quality effluent to the Root River. The current WWTP processes include removal of chemical phosphorus, suspended solids and associated contaminants, as well as organic materials; tertiary filtration; and, ultraviolet light disinfection. The proposed phosphorus permit limits are well below the water quality standard for the Root River and are on an order of a magnitude lower than many existing dischargers to the Basin.

9. Application to Comply with Applicable Laws. The Compact Council has reviewed the Application and the Exception shall be implemented to comply with all applicable municipal, State, Provincial and federal laws as well as regional interstate, inter-provincial and international agreements, including the Boundary Waters Treaty of 1909. (Compact § 4.9.4.f)

10. Precedent-Setting Impacts. The Compact Council has reviewed the Application for precedent-setting impacts and finds that any precedent-setting consequences associated with the Application will not adversely impact the Waters and Water Dependent Natural Resources of the Basin. (Compact § 4.9.4.d)

10a. Based on these facts and circumstances, the findings in this Final Decision are unique to this Applicant and Application and do not necessarily apply to any other applicant or application. The unique circumstances in the Application include, without limitation:

- i.** The Applicant is under a court order to achieve complete compliance with all federal and state drinking water radionuclide standards by June 30, 2018.
- ii.** Terminating use of the existing deep aquifer well water supply system will eliminate Waukesha's water utility system as a source of radium and the dispersion of radium into the environment.
- iii.** The Applicant's wells in the deep aquifer are in a confined aquifer which restricts recharge and contributes to groundwater decline.
- iv.** The deep aquifer groundwater supply is hydrologically connected to waters of the Basin. Continued use of that aquifer draws groundwater away from the Basin. The subsequent discharge of treated wastewater into the MRB surface waters results in loss of water from the Lake Michigan watershed.

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- v. An environmental analysis of MRB water supply alternatives predicts unavoidable significant impacts to hundreds of acres of wetlands or unavoidable significant impacts to three seepage lakes.
- vi. The Applicant's return flow management plan will return to the Lake Michigan watershed approximately 100% of the volume of water withdrawn.
- vii. The Applicant has separate storm and sanitary sewers, and the WWTP design and operation will prevent the spread of invasive species from the MRB and protect against return flow as the result of sewage overflow.
- viii. The Applicant's wastewater treatment plant includes removal of chemical phosphorus, suspended solids and associated contaminants, as well as organic materials; tertiary filtration; and, ultraviolet light disinfection.

11. Hydrologically Interconnected to Waters of the Great Lakes Basin. Most of the Applicant's existing water supply is derived from groundwater that is hydrologically interconnected to Waters of the Basin. Groundwater pumping from the deep aquifer in southeast Wisconsin has changed the predevelopment groundwater flow direction from flowing towards the Lake Michigan watershed to flowing towards pumping centers. Currently, the largest pumping center from the deep aquifer in southeast Wisconsin is in Waukesha County. The Applicant's existing deep aquifer wells are pumping and distributing water that once flowed towards the Lake Michigan watershed and is now flowing towards pumping centers. (Compact § 4.9.3)

11a. Groundwater modeling reported in 2005 (based on 2000 data) by USGS and the WGNHS estimated that about 30 percent of the replenishment of the water withdrawn by wells in the deep aquifer in southeast Wisconsin is derived from the Lake Michigan watershed. Of the Lake Michigan watershed water, approximately 4 percent is induced directly from Lake Michigan. Approving a diversion of Great Lakes water with return flow will result in a net increase of water in the Lake Michigan watershed.

11b. Reduced drawdown pressure on the regional deep aquifer would have important benefits to surface water hydrology and is of material interest to the Water Dependent Natural Resources of the Lake Michigan watershed and MRB.

11c. In 2014, the Applicant withdrew 6.6 MGD of water. Approximately 5.6 MGD of this withdrawal was from deep aquifer wells. Given the interconnection between the deep aquifer and the Lake Michigan watershed, cessation of this withdrawal will aid the recovery of the natural groundwater flow system.

11d. Based on USGS and WGNHS estimates and the Applicant's 2014 withdrawal rates, there will be approximately a 1.6 MGD net increase over time in water to the Lake Michigan watershed with cessation of the Applicant's withdrawals from the

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deep aquifer. 1.6 MGD represents less than one percent of the total recharge of the Lake Michigan watershed in southeast Wisconsin.

- 12. Additional Benefit to the Basin.** The return flow will benefit a Basin tributary, the Root River, by adding flow during times of low flow on the river. Increased flow will result in an improvement of the fishery and benefits to the Basin salmonid egg collection facility located downstream on the Root River (*see* Section II.7.b above). (Compact § 4.9.3.e and 4.9.4.d)
- 13. Regional Review and Council Review.** The Application has undergone Regional Review by the Regional Body in accordance with the Agreement and the Interim Procedures as adopted on June 10, 2010, as well as Council Review in accordance with the Compact and the Interim Guidance as adopted on June 10, 2010. (Compact § 4.9.3.f and 4.7.2)
- 14. Authority to Condition.** The Compact Council has the authority to impose on its decision on the Application the conditions included in this Final Decision on the Application. (Compact § 4.5.5.b.iii and 4.7.2)
- 15. Enforceability.** The Compact Council finds that the authority to impose conditions on an approval is provided in several provisions of the Compact (Section 4.5.5.b.iii and 4.7.2). The Compact Council is also authorized under Section 4.7.2 to: “. . . take action on Proposals in accordance with this Compact and the Standard of Review and Decision.” The enforcement authority provided in Compact Section 7.3.2.a provides the authority to enforce any conditions so imposed. Pursuant to section 7.3.2.a of the Compact, “any Party or the Council may initiate actions to compel compliance with the provisions of this Compact.” Therefore, the Compact Council finds that an approval of this Application with conditions is an action authorized by and under the provisions of the Compact and further finds that this Final Decision and any conditions incorporated herein are enforceable by the Council and any Party to this Compact pursuant to section 7.3.2.a, up to and including voiding the diversion authorized by this Final Decision if warranted by the circumstances.

III. Final Decision and Conditions

1. Application Satisfies Agreement and Compact Criteria

The Compact Council approves the Application for a Diversion of Basin water to a Community in a Straddling County as submitted by Wisconsin, as the Originating Party, because it satisfies all Agreement and Compact criteria for an Exception to the ban on Diversions to a Community in a Straddling County, as long as the conditions in Section III.2 below are met. (Compact § 4.9.3 and 4.9.4)

2. Conditions on the Diversion

The Compact Council finds that, pursuant to the requirements in Compact § 4.9.3.c, the Originating Party has the authority to manage the Applicant’s Diversion of Basin

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water, and that the Originating Party will manage and regulate the Diversion including all conditions of this Final Decision, including, without limitation, the following specific conditions:

- A. *Compact Principles.*** The Applicant will implement the Diversion in accordance with the overarching principles of the Compact.
- B. *Approved Diversion Amount and Approved Diversion Area.*** The Approved Diversion Area shall be as described in Section II.5 and depicted in Attachment 1, and the amount of water diverted from the Basin by the Applicant shall not exceed the Approved Diversion Amount as defined in Section II.5. No part of the Diversion of water from the Basin authorized as the Approved Diversion Amount may be used by the Originating Party or the Applicant for any territory outside of the Approved Diversion Area.
- C. *Water Conservation and Efficiency Plan.*** The Applicant must continue to implement and enforce all elements of its current water conservation and efficiency plan (and any future revisions) in the Approved Diversion Area, in order to meet or exceed if possible the 10% demand reduction due to the implementation of the water conservation and efficiency plan. This plan must be updated at a minimum of once every ten years.
- D. *Existing Deep Aquifer Groundwater Wells.*** Some existing deep aquifer groundwater wells may be maintained by the Applicant to be used only under emergency conditions, but only for the duration of the emergency. These wells shall not be used as part of the Applicant's regular water supply under any circumstances. The Applicant will meet all water quality discharge standards in accordance with state and federal law, including during those periods when the deep aquifer wells are used for emergency purposes.
- E. *Groundwater Withdrawals in Approved Diversion Area.*** The Application, the Originating Party's Technical Review and other comments submitted during the Regional Review process identified adverse consequences that would be caused by increased use of shallow or deep groundwater to meet the Applicant's water supply needs as part of the basis for concluding that no other reasonable water supply alternatives were acceptable, thereby justifying the Approved Diversion Amount for the Approved Diversion Area. These adverse consequences included: (i) impacts to certain surface water resources and wetlands, (ii) continued extraction and dispersion of radium into the environment, and (iii) withdrawal of groundwater from the Lake Michigan watershed and discharge into the MRB without return flow. As a condition of the approval of the Diversion, WDNR should use all of its available legal authority to prevent the same or substantially similar consequences from any other groundwater withdrawals within the Approved Diversion Area.
- F. *Other Controls on Groundwater Withdrawals.*** The Application, the Originating Party's Technical Review and other comments submitted during the Regional Review process identified that the Approved Diversion Amount for the Approved

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Diversion Area with return flow will produce net benefits within the Lake Michigan watershed due to the hydrological connection between the MRB and the Lake Michigan watershed. As a condition of approving the Diversion, WDNR should use all of its available legal authority to prevent any other groundwater withdrawals that would reverse this benefit.

- G. *Pharmaceutical and Personal Care Products Recycling and Impacts.*** The Applicant must implement a comprehensive pharmaceutical and personal care products recycling program and continually use the best available methods to encourage the further reduction of such products into the wastewater as recommended by the Originating Party.
- H. *Return Flow to Root River.*** The Applicant must return to the Root River, a Lake Michigan tributary, 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.
- I. *Monitoring of Root River Flow.*** For a minimum of 10 years from the beginning of return flow to the Basin, the Applicant must implement a scientifically sound plan to monitor the mainstem of the Root River to determine changes that may have resulted from return flow (such as volumes, water temperatures, water quality and periodicity of discharge) in order to adapt future return flow to minimize potential adverse impacts or maximize potential benefits to water dependent resources of the Basin source watershed (*i.e.*, Lake Michigan).
- J. *Annual Reporting.*** The Applicant must complete an annual report that documents the daily, monthly and annual amounts of water diverted and returned to the Lake Michigan watershed over the previous calendar year ("Annual Report"). An Annual Report must be submitted by the Originating Party to the Regional Body and the Compact Council by the due date established by the Regional Body and the Compact Council for the Annual Water Use Reporting to the Great Lakes water use repository, and include a section on the implementation and effectiveness of the water conservation and efficiency program, a summary of the results of the work conducted under Section III.2.I and a status and verification of compliance with each of the conditions stated in this Section III.2. The Annual Report must also be made available to the public on the Applicant's webpage.
- K. *Federal and State Permits and Approvals; Incorporating Conditions into Originating Party Permits and Approvals.*** The Applicant must obtain, and be in compliance with, all necessary federal and state permits and approvals from the Originating Party and other relevant governmental agencies before beginning the Diversion, and all of the above conditions imposing obligations upon the Applicant must be incorporated into the state permit or approval as legally enforceable provisions under the Originating Party's state law.

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- L. *Performance Audit.*** For as long as the City of Waukesha withdraws Basin water pursuant to this approved diversion, the City of Waukesha upon 30 days advance written notice shall allow the Compact Council or any Party to conduct an inspection and audit of the City of Waukesha operations; and the WDNR, upon 30 days advance written notice shall allow the Compact Council or any Party to inspect its records related to enforcement of this diversion and all conditions stated in this Section III.2.
- M. *Enforcement.*** This Final Decision will be enforceable by the Compact Council and any Party (as defined under Section 1.2 of the Compact) under the Compact pursuant to Compact Section 7.3.2.a.

Approved on this 21st day of June, 2016 by the Great Lakes-St. Lawrence River Basin Water Resources Council

AYES: (8)

NAYS: (0)

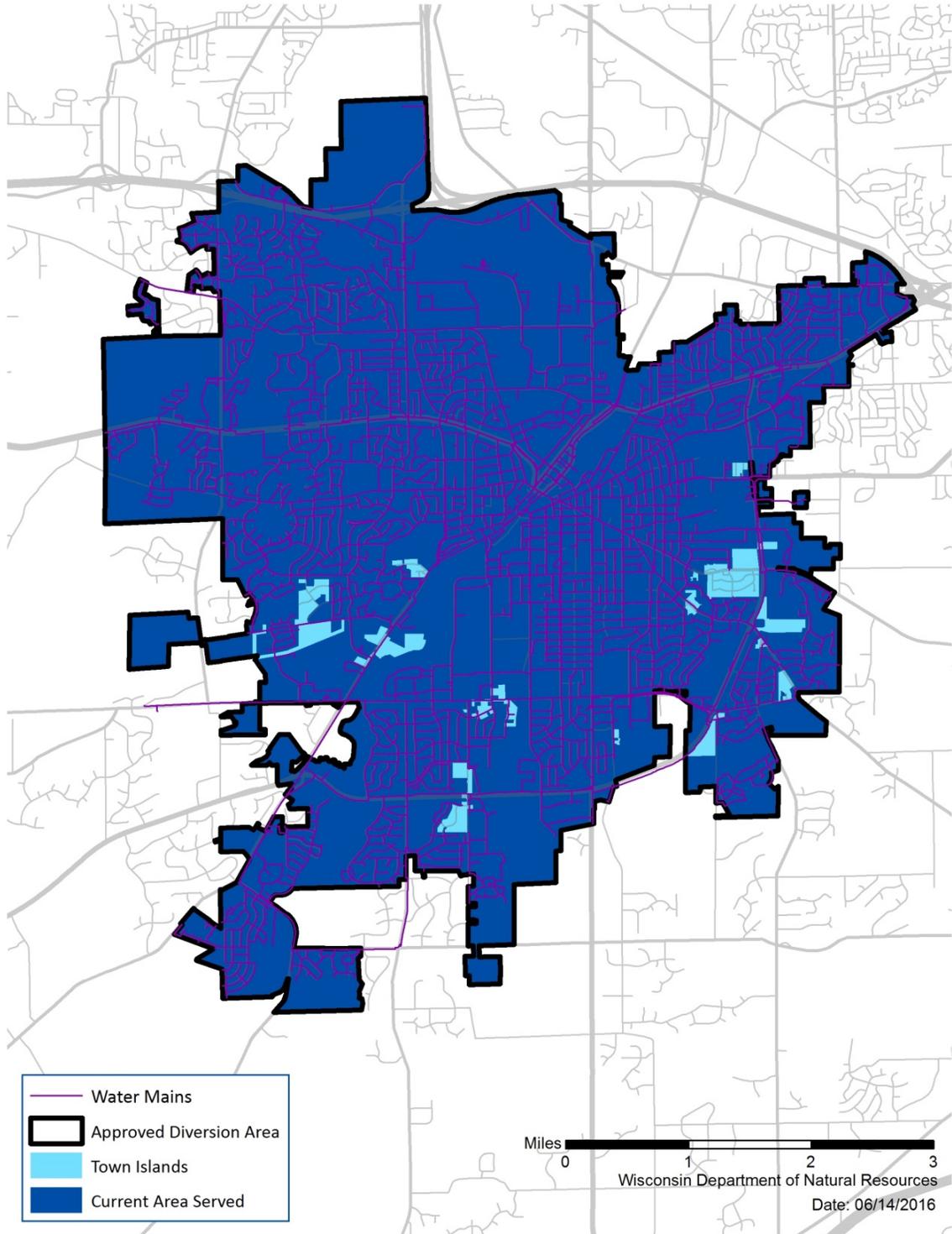
ABSTAIN: (0)



Chair
Great Lakes-St. Lawrence River
Basin Water Resources Council

June 21, 2016

Attachment 1: Approved Diversion Area



June 21, 2016

This Attachment was prepared based on the following as of May 18, 2016: (1) the City of Waukesha boundaries as recorded by the Waukesha County Register of Deeds; (2) unincorporated land lying within the perimeter boundary of the City of Waukesha, as recorded by the Waukesha County Register of Deeds, that is either fully surrounded by territory incorporated in the City of Waukesha or is bordered on one side by a transportation right-of-way and on the remaining sides by territory incorporated in the City of Waukesha; and (3) areas currently served that are outside the City of Waukesha's jurisdictional boundaries, consisting of the following tax parcels as registered by the Waukesha County Register of Deeds:

We Energies

WAKT1298986003	PWC 0983031
WAKT1298985	PWC 0983040
WAKT1297938	PWC 0983041
WAKT1297937	PWC 0983042
WAKT1298986001	PWC 0983043
WAKT1298986006	PWC 0983044
WAKT1298986005	PWC 0983030
WAKT1297936	PWC 0983028
WAKT1298986004	PWC 0983012
WAKT1298999	PWC 0983045

Cloverland Farms

PWC 0983017	PWC 0983046
PWC 0983018	PWC 0983011
PWC 0983020	PWC 0983047
PWC 0983016	PWC 0983047
PWC 0983019	PWC 0983010
PWC 0983021	PWC 0983009
PWC 0983015	PWC 0983048
PWC 0983022	PWC 0983008
PWC 0983014	PWC 0983049
PWC 0983025	PWC 0983007
PWC 0983023	PWC 0983006
PWC 0983039	PWC 0983050
PWC 0983038	PWC 0983005
PWC 0983037	PWC 0983051
PWC 0983024	PWC 0983004
PWC 0983026	PWC 0983052
PWC 0983036	PWC 0983003
PWC 0983035	PWC 0983053
PWC 0983034	PWC 0983002
PWC 0983033	PWC 0983054
PWC 0983013	PWC 0983001
PWC 0983032	PWC 0983055
PWC 0983027	PWC 0983056
	PWC 0983058
	PWC 0983057

Appeal Rights

If you believe that you have a right to challenge this decision, you should know that Wisconsin Statutes and Administrative Rules establish time periods within which requests to review Department decisions must be filed. For judicial review of a decision pursuant to Sections 227.52 and 227.53 of the State Statutes, you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review must name the Department of Natural Resources as the Respondent.

To request a contested case hearing pursuant to Section 227.42 of the State Statutes, you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources. The filing of a request for a contested case hearing is not a prerequisite for judicial review and does not extend the 30-day period for filing a petition for judicial review.

All requests for contested case hearings must be made in accordance with section 227.42, Wis. Stats., and section NR 2.05(5), Wisconsin Administrative Code, and served on the Secretary in accordance with section NR 2.03, Wisconsin Administrative Code. Pursuant to Section NR 2.05(5), Wisconsin Administrative Code, and Section 227.42, Wis. Stats., the Petitioner is required to include specific information demonstrating the following:

1. The substantial interest of the Petitioner which is injured in fact or threatened with injury by Department action or inaction;
2. That there is no evidence of legislative intent that this interest is not to be protected;
3. That the injury to the Petitioner is different in kind or degree from the injury to the general public caused by the Department action or inaction; and
4. That there is a dispute of material fact (you must specify the disputed fact(s)).