

**Comment Summary and Response concerning the
Scope of the Environmental Impact Statement and Great Lakes Compact Review Criteria
for the City of Waukesha's Request to Divert Water from the Great Lakes**

October 18th, 2011

Introduction

The [Great Lakes–St. Lawrence River Basin Water Resources Compact](#) (Great Lakes Compact) and [Sustainable Water Resources Agreement](#) (Great Lakes Agreement) address water quantity management in the [Great Lakes basin](#). The Great Lakes Compact, codified in [Chapter 281 of the Wisconsin Statutes](#), prohibits diversions of Great Lakes water, with limited exceptions. One exception to the Great Lakes Compact's ban on diversions allows a "community within a straddling county" to apply for a diversion of Great Lakes water. The City of Waukesha has requested to divert water from the Great Lakes basin under this exception.

The Wisconsin Department of Natural Resources (WDNR) held public hearings on July 26, 27, and 28 of 2011 concerning the City of Waukesha's application. The WDNR specifically sought public comments concerning the scope of the Environmental Impact Statement (EIS), Great Lakes Compact Review Criteria, and proposed public participation process. The EIS scoping process started on February 5, 2010. The comment period closed on August 13, 2011.

This document summarizes the comments received —both written and oral—through the first public comment period and provides a response to the comments. The WDNR responses below refer to the [Great Lakes Compact Review Criteria for a Community within a Straddling County](#) concerning: Water Supply, Water Conservation, Return Flow, Impact Assessment, and additional criteria. Comments and responses are summarized categorically. The major sections of this document are: draft EIS/draft Technical Review Process, Water Supply, Water Conservation, and Return Flow.

Draft EIS/Draft Technical Review Process

Comment 1: Deny the City of Waukesha's Water Diversion Application to draw water from Lake Michigan.

Response: Comment noted.

Comment 2: Approve the City of Waukesha's Water Diversion Application to draw water from Lake Michigan.

Response: Comment noted.

Comment 3: The City of Waukesha's application will set a precedent by which all other diversion requests in the basin will be judged. As such, the importance of this application to the future of our magnificent Great Lakes cannot be overstated. As such, the importance of having a comprehensive review in an open and transparent process for all citizens of Wisconsin and for all citizens in of the Great Lakes basin is fundamental to protecting this world class environmental, economic and cultural resource.

Response: Under the Great Lakes Compact, WDNR is required to review the City of Waukesha's application against a specific set of environmentally related criteria. These criteria include the requirement to review for potential "cumulative impacts that might result due to any precedent-setting aspects of the proposed diversion...". In response to the significant public interest in the application, WDNR provided an initial set of public hearings and comment period, and will provide additional hearings and comment period for the public to review the WDNR's draft Technical Review of the application and the draft Environmental Impact Statement (EIS).

Comment 4: We want to thank the WDNR for this opportunity to comment on the scope of the EIS and the draft review criteria. We commend the WDNR for choosing the EIS route for this proposal. It is the right process to an application this important.

Response: Comment noted.

Comment 5: We commend the City of Waukesha for taking decisive action to comply with the US EPA and WDNR's order to remedy the radium contamination within their water supply wells and provide what most of us take for granted-clean drinking water.

Response: Comment noted.

Comment 6: The WDNR must carefully scrutinize Waukesha's proposal to determine whether it complies with all requirements of the Great Lakes Compact and Wisconsin's implementing legislation. The WDNR must conduct a thorough review of the environmental impacts of the proposal and alternatives as called for in the Wisconsin Environmental Policy Act (WEPA).

Response: Agreed.

Comment 7: The WDNR should hold a hearing on the completeness of the application before starting the draft Technical Review and draft EIS.

Response: Comment noted. Although the WDNR has begun a Technical Review of the application, the WDNR will continue to request additional information from the City of Waukesha as needed. The WDNR has posted the proposed review process to the Water Use Program's [website](#) (See Public Participation tab).

Comments 8: Concerns expressed that:

- The City of Waukesha is not within the Great Lakes Basin and therefore should not be able to apply for a diversion of water from the Great Lakes basin under Great Lakes Compact, Great Lakes Agreement or Wisconsin State Statutes.
- This application sets a precedent for allowing states like Georgia, Texas and California to request diversions of water from the Great Lakes basin.
- The application should not be approved as it will set a precedent for other communities to apply for diversions that could lower the Great Lakes water levels.

Response: The Great Lakes Compact and Wisconsin's implementing language all prohibit diversions of water from the Great Lakes basin with limited exceptions for communities that straddle the Great Lakes basin divide and for communities in counties that straddle the Great Lakes basin divide. The City of Waukesha is located within a county that straddles the Great Lakes basin divide and may request approval from the WDNR and other Great Lakes states to divert water from the Great Lakes basin. The Great Lakes Compact also requires that any community diverting Great Lakes water return the diverted water to

the Great Lakes basin, less an allowance for consumptive use. States like Georgia, Texas and California are not eligible to request a diversion of Great Lakes water. See [Water Supply Criterion 1](#).

Comment 9: The WDNR should be mindful of the differences between the provisions in the Great Lakes Compact and Wisconsin's implementing language. Since the Great Lakes Compact is federal law, the Compact preempts any conflicting state law. The WDNR must ensure that it reads its state law to be consistent with the Compact to avoid a direct conflict. In cases where there may be more than one way to interpret the Compact Language, the WDNR should consider that other states and provinces are not bound by its reading of the text in their review.

Response: Comment noted. The WDNR compiled the [Great Lakes Compact Review Criteria](#) document to note the criteria in both the Great Lakes Compact and Wisconsin's implementing language, [Chapter 281.346](#).

Comment 10: [Wisconsin Environmental Policy Act](#) (WEPA) regulations require the WDNR to specifically address the degree in which Waukesha's proposed water diversion may establish a precedent for future actions or foreclose future options, including consistency with plans of local, state or federal government.

Response: Agreed. Under [NR 150.22\(2\)\(a\)4](#), Wis. Adm. Code, the EIS must describe the "degree in which the action may establish a precedent for future actions or foreclose future options. This includes consistency with plans or policy of local, state or federal government."

Comment 11: The EIS must describe the measures that could be taken by the City of Waukesha to prevent and mitigate any environmental impact and the costs associated with those measures. These should include impacts to Underwood Creek, Menomonee River, Root River, and other surface waters including Vernon Marsh and Fox River and any impacts during implementation.

Response: The EIS will describe actions that could be taken by the City of Waukesha to prevent or mitigate potential environmental impacts, as required under [NR 150.22\(2\)\(c\)](#), Wis. Adm. Code, as well as any adverse environmental impacts that cannot be avoided, as required under [NR 150.22\(2\)\(d\)](#), Wis. Adm. Code. The EIS provides no authority to determine or condition any permit decisions. However, the WDNR reserves the authority to include conditions within a draft Decision and associated permits if such conditions are needed to meet standards set forth within the Great Lakes Compact or other applicable laws.

Comment 12: Concerns expressed that the WDNR should include a discussion of impacts that could have catastrophic consequences, even if their probability of occurrence is low. Examples include: rupture of a pipeline, prolonged failure by the supplier to provide water, wastewater treatment plant failure, prolonged drought, and so on.

Response: The EIS will include an evaluation of impacts which have catastrophic consequences, even if their probability of occurrence is low, provided that the analysis of the impacts is supported by credible scientific evidence, is not based on pure conjecture, and is within the rule of reason., as specified under [NR 150.22\(2\)\(d\)](#).

Comment 13: Concern expressed that the WDNR is simultaneously reviewing the application and preparing a draft EIS and that such an approach is directly contrary to the state regulations. Concerns expressed that the WDNR should not finalize the Technical Review until after the 30-day comment period for the final EIS.

Response: [NR 150.025\(2\)\(e\)](#) states that the WDNR should “[i]mplement the environmental review procedure as an integral process, not a separate sequence of activities, that must be part of the *initial planning process* for department projects and initiated at an *early stage* of the regulatory review process” (WDNR emphasis). Therefore, WDNR actions are not contrary to state regulations. The WDNR has posted the proposed review process to the Water Use Program’s [website](#) (See Public Participation tab).

Comment 14: In order for the average citizen to understand all the alternative options to all aspects of the diversion and discharge of water, the EIS should compile all of the massive information in a side-by-side analysis so that alternatives on all the key issues can be compared for their respective environmental, social, and economic impacts both negative and positive. It is critical that the final impact statement is easy for the average person to read, understand and make informed decisions.

Response: [NR 150.22\(1\)\(d\)](#), Wis. Adm. Code, states that “An environmental analysis shall be written in plain language and should use appropriate graphics to aid decision makers and the public. Where appropriate, an environmental analysis may be combined with other required environmental or planning documents.” The WDNR will draft the EIS as a plain-language document and, where appropriate, will include information in a side-by-side analysis.

Comment 15: As the EIS analyzes the need for the City of Waukesha to divert water from the Great Lakes basin, the WDNR must include a thorough analysis of 1) the amount of water needed, 2) consequences of discharging such water by the city, 3) when is the water needed (now or 15 to 20 years down the road?).

Response: This analysis is required by the [Water Supply Criteria 2 and 4](#). The WDNR will analyze the water supply alternatives in the context of a 20year Water Supply Service Area Plan, including analysis of reasonable water supply alternatives and the potential environmental impacts of the various water supply alternatives and return flow options proposed by the City of Waukesha in its application. This analysis will be included in the draft Technical Review and draft EIS.

Comment 16: Over 200 people gathered in the village of Kagawong, Ontario, for one of the [International Upper Great Lakes Study Board](#) meetings. Many spoke forcefully, and let the board know in no uncertain terms that Great Lakes water is of extreme importance to the people of Manitoulin Island, the North Channel of Lake Huron, and Georgian Bay. In attendance were First Nation representatives, representatives from the Manitoulin Area Stewardship Council, Georgian Bay Forever, Georgian Bay Association, the French River Association, Ontario Sierra Club, a number of mayors, the Island’s Provincial Member of Parliament, and the Island’s Federal Member of Parliament. Lakes Michigan and Huron have now experienced 13 years of unprecedented low water, and climate change may have worse in store. Great damage has already been done to vast areas of shoreline and some of the world’s most productive wetlands. There has been substantial ecosystem damage, and the economic losses have been significant. Everyone at the Kagawong meeting, and all of the people they represent, are, in my opinion, firm in their opposition to extraction and diversion from the Michigan/Huron watershed—especially the Saint Clair River, Chicago, and now Waukesha. “Death by a thousand straws,” as has been said. Waukesha is seen as an egregious part of an ongoing attack on the Lake Michigan Huron basin, and the question asked is “if Waukesha now, then, what next.”

Response: The Great Lakes are an important and internationally significant resource. The Great Lakes Compact allows for communities in straddling counties such as the City of Waukesha to apply for a diversion. To be approvable, any diversion application must meet all the necessary legal criteria, including that the diversion will not “endanger the integrity of the Great Lakes basin ecosystem” and that “no significant adverse individual impacts or cumulative impacts” occur that would affect the quantity or

the quality of the Great Lakes basin including any cumulative impacts caused by “precedent-setting aspects of the proposed diversion.” Additionally, to protect against water level impacts from a diversion, the Compact requires that any diverted water to be returned to the Great Lakes basin.

Comment 17: The [Great Lakes Indian Fish and Wildlife Commission](#) (GLIFWC) urged the WDNR to add the tribes and tribal ceded territory interests to the list of EIS topics. They also stated that, in “a federal court case that reaffirmed the treaty rights in Wisconsin, the court held that states’ ability to manage resources in the ceded territory is narrowed to a significant degree by the existence of the treaty right. [Lac Courte Oreilles Band of Lake Superior Chippewa Indians v. State of Wisconsin, 707 F Supp. 1034, 1060 Wis. 1989](#).” Thus states do not have unfettered discretion to authorize withdrawals or diversion that would adversely affect or undermine treaty guaranteed rights.”

Response: Tribal interests (including tribal ceded territory interests) has been added to the list of EIS topics. Within the draft Technical Review, the WDNR will also assess whether or not the City of Waukesha has met [Additional Criterion 2](#), which requires the proposal to comply with all local, state, federal and international laws and agreements, including treaties between the Federal Government and First Nations.

Comment 18: Several comments were made that the EIS must describe and evaluate all applicable local, state, federal and international laws or treaties the City of Waukesha’s application must abide by, including any required approvals. Concern was specifically expressed about whether or not the WDNR would review the City of Waukesha’s application in light of the local laws within impacted communities such as the City of Milwaukee, Racine or Oak Creek.

Response: The EIS must describe and evaluate all state and federal approvals (including the Great Lakes Compact) that will be required for the Waukesha project. Furthermore, under [NR 150.22\(2\)\(f\)](#), Wis. Adm. Code, the EIS must include “[a] description and evaluation of required state or federal approvals. Where an environmental analysis is prepared on a proposal involving multiple state or federal regulatory actions, it will address each of the approvals and indicate the conformance or nonconformance of the project with applicable statutes, rules, and regulations. Local zoning actions shall also be addressed if appropriate.”

Comment 19: The WDNR has developed a comprehensive public participation process for this proposal that solicits public input at several different points. However, the agency has failed to issue rules governing public notice and public hearings for diversion proposals as required by the state’s implementing legislation. The agency should move swiftly to issue the rules, as they would provide certainty to the public and the applicant about the process.

Response: Comment noted.

Comment 20: Concerns expressed that WDNR should hold public hearings or information meetings within the Cities of Milwaukee, Racine and Oak Creek regarding the alternatives proposed by the City of Waukesha.

Response: Comment noted. In the next stage of public review, the WDNR has agreed to hold a public hearing in the City of Milwaukee and will schedule additional hearings in locations dependent on the final specifics of the application concerning water supply sources and return locations, and the WDNR’s draft EIS, Technical Review, and decision.

Comment 21: The EIS should consider effects of the Waukesha Project on surface water, wetlands, groundwater, flora and fauna; and concern expressed that providing Lake Michigan water to the City of Waukesha will promote further growth and development in that area and result in environmental impacts.

Response: The draft list of EIS topics to be considered includes—but is not limited to—effects on: surface water resources, wetlands, groundwater resources, flora, and fauna, as well as socioeconomic impacts.

Comment 22: What are the Compact Council and Regional Body’s role in reviewing an application to divert Great Lakes water?

Response: If the WDNR determines the City of Waukesha’s application is approvable, the WDNR will forward the application, WDNR’s Technical Review, and EIS to the Regional Body and Compact Council to review. The Regional Body and Compact Council will hold an independent public hearing on the application. The Regional Body will issue a Declaration of Findings on the application recommending the application be approved, denied or approved with modification. Subsequently, the Compact Council will consider the Declaration of Findings and determine if the application meets the Compact Criteria. If the Compact Council approves the application (approval must be unanimous), the application must be returned to the WDNR for final approval.

Comment 23: What does economically feasible mean? Economically feasible for whom?

Response: The phrase “economically feasible” is not specifically defined in [Ch. 281, Wis. Stats.](#) The WDNR will use its best professional judgment in applying this criterion in any given fact situation.

Water Supply

Comment 24: There were several comments made recommending that the WDNR restrict the uses of the water diverted from the Great Lake basin by the City of Waukesha to human, livestock, and/or residential purposes.

Response: Within the draft Technical Review, the WDNR will evaluate whether or not the proposed uses presented within the City of Waukesha’s diversion application meet [Water Supply Criterion 1](#), which defines a public water supply system as “water distributed to the public through a physically connected system of treatment, storage, and distribution facilities that serve a group of largely residential customers and that may also serve industrial, commercial, and other institutional customers.”

Comment 25: A number of individuals expressed support of the City of Waukesha’s application for Lake Michigan water (for one or more of the following reasons) stating that they believed it will:

- Provide sustainable, safe, clean, reliable water to homes and businesses for the next 50 to 100 years
- Protect public health
- Ensure a long-term water supply
- Promote or ensure economic growth
- Meet the needs of the business community
- Allow local businesses to grow and thrive
- Provide or create local jobs
- Ensure that income tax dollars stay here
- Make the most economic sense
- Benefit the local economy
- Be in the best interest of the community

- Enable the city, its citizens, and businesses to survive

Response: Comments noted. WEPA requires evaluation of the “human environment” which includes socioeconomics. The EIS will evaluate reasonably foreseeable economic effects. See [s. 1.11\(2\)\(c\)6](#), Stats., and [NR 150.22\(2\)\(d\)](#), Wis. Adm. Code.

Comment 26: Concern expressed that the WDNR understand that water use is known to fluctuate during extreme temperature variations and changing economic conditions. Short-term evaluations result in an inaccurate picture of true water needs of the community.

Response: The City of Waukesha’s application includes a water supply service area plan that projects water demand to 2035 and 2050 based on population projections and comprehensive planning as part of the water supply planning process specified in [s. 281.348](#), Wis. Stats. The Department will review the City of Waukesha's projected water needs as part of the analysis for the draft EIS and draft Technical Review.

Comment 27: The EIS process and the Great Lakes Compact include requirements for assessing the need for and the reasonableness of the proposed action. Concerns were expressed that the WDNR should focus its attention on clearly assessing Waukesha’s need for a Lake Michigan water supply, as an alternative to their potential local sources of water supply, including combinations of local sources. To conduct this analysis, the WDNR must identify the sustainable yield of Waukesha’s current well system, including both deep and shallow wells. Adjacent communities have reduced or ended pumping from the deep aquifer and this may have reduced not only the rate of decline of the deep aquifer, but also the levels of radium within the deep aquifer.

Response: Within the draft Technical Review, the WDNR will assess whether or not the City of Waukesha’s proposed alternatives meet [Water Supply Criteria 1 and 2](#) that require that the proposal must show that: the community is “without adequate supplies of potable water”, and that there “is no reasonable water supply alternative.” The EIS will also include “an evaluation of the need for the proposal”, as required under [NR 150.22\(2\)\(b\)](#), Wis. Adm. Code.

Comment 28: The Lake Michigan water supply alternative will reduce energy usage and greenhouse gas emissions associated with the water supply. Pumping water from extreme depths is energy-intensive and costly, and increased the carbon footprint the water utility. Moreover, if use of the deep aquifer is continued, desalination treatment to remove total dissolved solids (TDS) may eventually be required, an expensive and energy-intensive process.

Response: The EIS will include an evaluation of energy use as required under [s. 1.12\(2\)](#) and [NR 150.22\(2\)\(d\)](#), Wis. Adm. Code.

Comment 29: Concerns were expressed that experts from the [Southeastern Wisconsin Regional Planning Commission](#) (SEWRPC) and the University of Wisconsin-Milwaukee have issued studies that indicate that Waukesha’s current and available water supplies, if appropriately managed, are sufficient through 2035 even at projected growth rates. Concerns were expressed that WDNR should ensure that all of the relevant information that the WDNR, the public, and other Great Lakes states will need to evaluate Waukesha’s water supply needs are on the record.

Response: The WDNR is currently collecting and analyzing information presented by the City of Waukesha as well as a variety of other professional studies. Within the draft Technical Review, the WDNR will use this information to assess whether or not the City of Waukesha’s application meets all of the criteria set forth within the Great Lakes Compact and Wisconsin’s implementing language. The EIS

will also include "an evaluation of the need for the proposal", as required under [NR 150.22\(2\)\(b\)](#), Wis. Adm. Code.

Comment 30: The EIS and draft Technical Review should include a thorough analysis of the amount of water needed and consequences associated with the requested amount of water. The public should know why the City of Waukesha requested to divert 10.9 million gallons per day (mgd) to meet its average daily demand and 18.5 mgd to meet its maximum daily demand. The request to service a projected ultimate population of 97,400 is based on the questionable assumption that "all land available for development has been developed in a manner consistent with the regional land use plan." Furthermore, as Waukesha's application shows, total water use by the city customers has dropped 31 percent from 1988 to 2008, despite an 18 percent population increase. This may be due to the loss of industrial customers, weather variability, economic considerations and other factors that affect withdrawal amounts. This has significant implications, not only for future water use, but also peak demands.

Response: The City of Waukesha must show that the "diversion is limited to quantities that are reasonable for the purposes for which the diversion is proposed" as is required by [Water Supply Criterion 4](#). Within the draft Technical Review, the WDNR will analyze whether or not the City of Waukesha has met this criterion. The EIS will also include "an evaluation of the need for the proposal", as required under [NR 150.22\(2\)\(b\)](#), Wis. Adm. Code.

Comment 31: Comments were made that the city estimates water rates will nearly double under the best-case total cost scenario, which relies on state and federal funds that have not been committed to the project. Indeed, Waukesha identifies the federally supported State Revolving Funds for Drinking Water and Clean Water as potential sources of funding – both of these funds have been declining for years and face additional cuts in the proposed federal budget for FY 2012. These are also funds relied upon by other Wisconsin Communities to meet existing infrastructure needs. The U.S. EPA estimates that Wisconsin already faces an estimated \$11 billion in unmet needs for drinking and wastewater service. An anticipated grant of \$75 million seems unrealistic. Without significant injection of state or federal funds, Waukesha residents could see their rates increase more than four-fold.

Response: [Water Supply Criterion 2](#) states that the proposal for the diversion of Lake Michigan water must show that there "is no *reasonable water supply alternative* within the watershed in which the community is located, including conservation of existing water supplies" (WDNR emphasis). "Reasonable water supply alternative" is defined as "a water supply alternative that is similar in cost to, and as environmentally sustainable and protective of public health as, the proposed new or increased diversion and that does not have greater environmental impacts than the proposed new or increased diversion". Waukesha's application for financing through the Federal Clean Water Fund and the Safe Drinking Water Loan Program are not part of the WDNR's analysis of diversion criteria. Additionally, the Wisconsin Public Service Commission (PSC) will review any proposed water utility rates.

Comment 32: Comments were made that if the City of Waukesha were to seek federal monies for its diversion infrastructure, it should be noted that EPA policies and Title VI of the Civil Rights Act of 1964 and its implementing requirements, include addressing whether the benefits and burdens of the proposed diversion would result in disproportionately adverse impacts on minorities and low-income populations. The EIS should discuss or address these impacts including specifically the potential relationship between water, development, and segregation.

Response: Comment noted. Within the EIS, the WDNR will analyze the relevant socioeconomic impacts of the proposal.

Comment 33: Portions of the Towns of Genesee and Waukesha are included in the City of Waukesha's diversion application. Both of these jurisdictions have adequate water supplies and have not identified a need for Lake Michigan water at present or in the foreseeable future. The WDNR must evaluate whether including these towns within the water supply service area is consistent with the Great Lakes Compact requirement that the community making the request for a diversion must be without adequate supplies of potable water.

Response: The WDNR will evaluate the proposed water supply service area and water supply service area plan for consistency with the [Great Lakes Compact Review Criteria](#) and other applicable laws.

Comment 34: If the Towns of Genesee and Waukesha are excluded from the water supply service area plan, will the WDNR reevaluate the reasonableness of the amount of water the City of Waukesha proposes to divert?

Response: Yes.

Comment 35: To help clarify the need for the proposal, WDNR's EIS should include in-depth consideration of a no-diversion alternative. The no-diversion alternative would consider the environmental, social and economic impacts of: maximizing effective water use management, implementing required water conservation measures, using radium treatment technology/systems, and consideration of some supplemental water supply alternatives drawn from sources west of the sub-continental divide. This analysis will also inform the WDNR's assessment of the Great Lakes Compact requirement that there be no reasonable water supply alternative within the basin in which the community is located, including conservation of existing supplies.

Response: The WDNR will analyze whether or not the City of Waukesha has demonstrated a need for the proposed diversion of water from the Great Lakes basin under [Water Supply Criteria 1, 2, and 4](#). The EIS will include an evaluation of alternatives to the proposal, including a rigorous exploration and objective evaluation of the potential environmental impacts of all reasonable alternatives, particularly those that might avoid all or some of the adverse environmental effects of the proposed action, including the no-action alternative, as required under [NR 150.22\(2\)\(e\)](#) and [NR 150.02\(2\)](#), Wis. Adm. Code. The EIS will also include "an evaluation of the need for the proposal", as required under [NR 150.22\(2\)\(b\)](#), Wis. Adm. Code.

Comment 36: Concerns expressed that Lake Michigan is the only reasonable water supply alternative for a variety of reasons. These include that:

- Fox and Rock Rivers cannot provide a reliable water supply during dry periods
- Damming the Fox and Rock River would cause negative environmental impacts, regulatory issues, and public property concerns
- Milwaukee River has poor water quality making it a poor choice for drinking water
- Waukesha area quarries cannot adequately supply the city with enough clean drinking water
- Local springs and Pewaukee Lake do not have sufficient water
- Wastewater reuse is not currently allowed by state statute and has public perceptions concerns and other potential problems
- Riverbank inducement would cause public health and environmental drawbacks

Response: Within the draft Technical Review, the WDNR will determine whether or not any of the water supply alternatives presented by the City of Waukesha meet [Water Supply Criterion 2](#), where a "reasonable water supply alternative" is defined as "a water supply alternative that is similar in cost to, and as environmentally sustainable and protective of public health as, the proposed new or increased

diversion and that does not have greater adverse environmental impacts than the proposed new or increased diversion.” The EIS will also include an evaluation of alternatives to the proposal, including a rigorous exploration and objective evaluation of the potential environmental impacts of all reasonable alternatives, particularly those that might avoid all or some of the adverse environmental effects of the proposed action, as required under [NR 150.22\(2\)\(e\)](#) and [NR 150.02\(2\)](#), Wis. Adm. Code.

Comment 37: Other cities with water supply problems have been able to dam a local river and use that as their primary source of water supply (see Lexington, Vasona, and Los Gatos Creek Trail Dams). For them, damming a river proved to be economically feasible. Will the WDNR be looking into the possibility of damming the Fox River as a primary source of water supply for the City of Waukesha?

Response: In March of 2002, the City of Waukesha water utility completed a future water supply study that evaluated a number of water supply options. The option of a dam on the Fox River was eliminated as a viable alternative due primarily to concerns over adverse environmental impacts, regulatory issues, and public/property concerns for the need to acquire significant areas of land. The WDNR will review the 2002 report and its assumptions and conclusions.

Comment 38: Concerns were expressed that all options for water supply other than Great Lakes water should be completely explored, before this application is approved, including potentially realistic combinations of the water supply alternatives. These include using the unconfined deep aquifer to the west, river inducement, shallow aquifer wells, enhanced conservation and expanded radium treatment.

Response: The City of Waukesha’s application has identified six water supply alternatives, including one alternative with multiple source options. The WDNR will analyze the six alternatives, including sub-alternatives identified in the multiple source alternative, to assess compliance with the Great Lakes Compact Criteria. Specifically, [Water Supply Criterion 2](#) requires communities in straddling counties requesting a diversion of Great Lakes water to show that “[t]here is no reasonable water supply alternative within the watershed in which the community is located, including conservation of existing water supplies.” Furthermore, “reasonable water supply alternative” is defined as “a water supply alternative that is similar in cost to, and as environmentally sustainable and protective of public health as, the proposed new or increased diversion and that does not have greater adverse environmental impacts than the proposed new or increased diversion.” The EIS will also include an evaluation of alternatives to the proposal, including a rigorous exploration and objective evaluation of the potential environmental impacts of all reasonable alternatives, particularly those that might avoid all or some of the adverse environmental effects of the proposed action, as required under [NR 150.22\(2\)\(e\)](#) and [NR 150.02\(2\)](#), Wis. Adm. Code.

Comment 39: Technical work was conducted in examining river inducement as a potential water supply alternative for the City of Waukesha. The WDNR should examine whether this alternative should be examined in more detail even though it was not formally provided as an alternative by the City of Waukesha.

Response: Technical information on the riverbank inducement study prepared by the University of Wisconsin - Milwaukee (UWM) and the United States Geological Survey (USGS) has been reviewed by the Department. A December 2, 2010 WDNR letter to the City of Waukesha requested that the City be prepared to review, evaluate and respond to the study on riverbank inducement. The City of Waukesha has reviewed and evaluated the riverbank inducement study and referenced the technical applications of riverbank inducement in the [Application for Lake Michigan Water Supply](#) and the supplemental information report submitted in April 2011. The WDNR will analyze the riverbank inducement alternative for the draft EIS and draft Technical Review.

Comment 40: The City of Waukesha's proposal within their application to divert water from Lake Michigan is the least expensive option for the city in the long-term.

Response: There are many factors that affect the overall long-term costs of each of the City of Waukesha's proposed water supply alternatives. The WDNR will analyze the costs associated with each of these alternatives and the results of this analysis will be included in the draft Technical Review and draft EIS. The WDNR will use these results to assess whether or not the City of Waukesha's application met [Water Supply Criterion 2](#).

Comment 41: Concerns were expressed that assessing the cost of each of the alternatives is an important aspect of the alternative analysis. Questions have been raised concerning the use of a 25% contingency factor for all alternatives, and whether or not the cost of legal conflicts, conservation easements, negotiations between different governmental bodies, meeting conditions within a WPDES permit, pipe sizes based on demanded supply, etc. were included. There were several comments that an independent consultant should be hired to review the cost estimates presented by the City of Waukesha.

Response: The WDNR has hired a consultant to independently analyze anticipated costs associated with each of these alternatives and any assumptions used in the formulation of these costs. The results of this analysis will be included in the draft Technical Review and draft EIS created by the WDNR.

Comment 42: Concerns were expressed that the City of Waukesha's deep aquifer wells are not a sustainable or a reasonable alternative to meet the long-term water supply needs of the community for a variety of reasons including that the deep aquifer:

- Recharges very slowly
- Is currently pumped at rates that exceed the rate which the aquifer can be renewed
- Has dropped 500 to 600 feet
- Continues to decline about five to nine feet a year
- Decline has contributed to a 12% decline in surface water resources
- Is contaminated with naturally occurring radium (a carcinogen) causing the US EPA and the WDNR to order the City to comply with safe drinking water standards by 2018
- Use will cause citizens to suffer the health impacts of radium
- Is located within one of only two Groundwater Management Areas in the state
- Has shifted causing sand to be pumped up from some wells
- May require investing significant amounts of money in radium treatment or other infrastructure
- Use currently leads to the discharge of radium laced water to the Mississippi River basin
- Wells not confined by the Maquoketa shale could interfere with other communities' and land owners' groundwater use and may cause legal battles

Concerns were expressed that the WDNR should also consider and evaluate the benefits of discontinued use of the deep aquifer including:

- Anticipated rebound in the water level of the deep groundwater aquifer
- Freeing the capacity of, and contribution to, long-term sustainability of the deep aquifer for use by other municipalities and industries in the Region
- Reducing reliance on the shallow aquifer by such municipalities and industries

Response: The WDNR will analyze the potential environmental impacts of the various water supply alternatives proposed by the City of Waukesha within its application as well as any other reasonable water supply alternatives. [Water Supply Criterion 2](#) defines "reasonable water supply alternative" as "a water supply alternative that is similar in cost to, and as environmentally sustainable and protective of public health as, the proposed new or increased diversion and that does not have greater adverse environmental

impacts than the proposed new or increased diversion.” This analysis will be included as part of the draft Technical Review and the draft EIS.

Comment 43: Because groundwater and surface water are hydrologically connected, ceasing the use of the deep aquifer will benefit wetlands and other surface water resources in the area.

Response: The WDNR will analyze the potential environmental impacts of the various water supply alternatives proposed by the City of Waukesha within its application as well as any other reasonable water supply alternatives. [Water Supply Criterion 2](#) defines “reasonable water supply alternative” as “a water supply alternative that is similar in cost to, and as environmentally sustainable and protective of public health as, the proposed new or increased diversion and that does not have greater adverse environmental impacts than the proposed new or increased diversion.” This analysis will be included as part of the draft Technical Review and the draft EIS.

Comment 44: Concerns expressed that extensive use of the shallow aquifer would result in adverse environmental impacts. The City of Waukesha currently obtains about 13% of its water supply from the Troy Bedrock Valley formation aquifer that also supplies the City of Muskego and the Villages of Mukwonago and East Troy. This aquifer is also hydrologically connected to the Vernon Marsh Wildlife Area, which is protected both by the state and regional land use planning authority. Modeling has shown that pumping at increased quantities is predicted to cause severe groundwater level drawdowns, reduce stream baseflow, and negatively impact more than 400 private well owners. Concerns were expressed over the potential purchase of the Lathers property by the City of Waukesha for the purposes of constructing such shallow aquifer high capacity wells.

Response: The WDNR will analyze the potential environmental impacts of the various water supply options proposed by the City of Waukesha within its application as well as any other reasonable water supply alternatives. [Section 281.346\(1\)\(ps\)](#), Wis. Adm. Code, defines “reasonable water supply alternative” as “a water supply alternative that is similar in cost to, and as environmentally sustainable and protective of public health as, the proposed new or increased diversion and that does not have greater adverse environmental impacts than the proposed new or increased diversion.” This analysis will be included as part of the draft Technical Review and the draft EIS.

Comment 45: The City of Waukesha has provided incomplete information on several key issues, including what municipality will be the provider of water. Without this information the WDNR and the public cannot fully evaluate the environmental impacts of the proposed alternatives.

Response: [Wis. Stat. Ch. 281](#) provides that if a community proposing to divert Great Lakes water will not directly withdraw the water proposed to be transferred, the community must identify any entities that may withdraw the water and provide evidence of support from each of those entities in the form of a letter or resolution. The City of Waukesha’s application provides evidence of support from potential water suppliers including the cities of Milwaukee, Oak Creek and Racine. Analysis of the water supply routes and the delineated water supply service area will be included in the draft EIS and Technical Review.

Comment 46: The environmental, social and economic costs of building new infrastructure to supply water to the Towns of Genesee and Waukesha must be fully developed in the Environmental Impact Statement.

Response: Comment noted.

Comment 47: Will the draft EIS and draft Technical Review discuss the potential impacts on stream flows, inland lake levels, and wetlands associated with the reliance on the shallow aquifer as a source of water supply?

Response: Yes. Within the draft EIS and draft Technical Review, the WDNR will evaluate reasonable water supply alternatives for the City of Waukesha and their anticipated impacts.

Comment 48: Concerns were expressed that the City of Waukesha's plan does not adequately contain redundancies and that the City should have standby water supply sources in case of emergencies. Questions were raised as to whether or not the WDNR would require the City of Waukesha to have such redundancies in place for emergencies and whether or not the costs associated with these redundancies was included in the City's analysis.

Response: The City of Waukesha will need to provide for emergency water supply if the City's application for Lake Michigan water is ultimately approved. The use of the existing wells is an option for providing emergency water supply. The use of emergency wells is regulated under s. [NR 810.22](#), Wis. Adm. Code, and the City of Waukesha would need to enter into an agreement with the Department regarding the terms of operating the emergency water supply wells. Costs associated with maintaining emergency water supply will be analyzed as part of the draft EIS and Technical Review.

Comment 49: There should be long-term agreements in place with whoever will be providing the City of Waukesha with water in order to be able to understand rates.

Response: Any supplier of Great Lakes water and the City of Waukesha will be responsible for entering into an agreement for the purchase of water. The [Wisconsin Public Service Commission \(PSC\)](#) is responsible for the regulation of water rates and is involved in the Technical Review process regarding rate impacts and project financing.

Comment 50: Concerns expressed that the water supply area designated by [Southeastern Wisconsin Regional Planning Commission \(SEWRPC\)](#) may imply that the City of Waukesha will be annexing all or portions of the Towns of Waukesha and Genesee in the foreseeable future.

Response: Comment noted.

Comment 51: Comments questioned if the effect of climate change and global warming had been included in the analysis of future water use by the City of Waukesha. The WDNR should consider the City of Waukesha's proposed alternatives in light of the report *Wisconsin's Changing Climate Impacts and Adaptation*, which predicts potential changes to the frequency and intensity of storms and precipitation patterns.

Response: The City of Waukesha references several reports and studies as part of the evaluation of water supply alternatives, including the 2010 SEWRPC Report No. 52, [A Regional Water Supply Plan for Southern Wisconsin](#). The SEWRPC water supply plan analyzed historic temperature and precipitation trends over the last 60 years and groundwater modeling input parameters approximate the current state of climate to represent the future climate conditions through the planning period. Most climate change models are applied on a global scale and not on a localized scale, such as water supply planning. The Wisconsin Initiative on Climate Change Impacts report, [Wisconsin's Changing Climate: Impacts and Adaptation](#), applied a statistical analysis of global models to assess state-wide impacts from climate change as a result of a predicted general increase in temperature and precipitation. The report documents that the impacts of climate change will vary due to the state's diverse geology and hydrogeology and site-specific conditions. The report also documents that any effects of increased precipitation on surface water,

groundwater and wetlands may be offset by concurrent increases in temperature and resulting changes in water use and land use patterns. There are limitations to assessing the impacts of climate change on a local scale for water supply planning. The WDNR will review applicable information and data regarding climate change as part of the draft EIS draft Technical Review of the water supply alternatives.

Comment 52: Whether the proposed use is reasonable should be based upon a consideration of the following factors:

- Whether the proposed withdrawal is planned in a fashion that provides for efficient use of water and will avoid or minimize the waste of water
- The balance between economic development, social development and environmental protection of the proposed withdrawal and use, and other existing or planned withdrawals and water uses sharing the water source
- The supply potential of the water source, considering quantity, quality, and reliability and safe yield of hydrologically interconnected water sources
- The probable degree and duration of any adverse impacts caused or expected to be caused by the proposed withdrawal and use, under foreseeable conditions, to other lawful consumptive or non-consumptive uses of water to the quantity or quality of the waters and water dependent natural resources of the basin, and the proposed plans and arrangements for avoidance or mitigation of such impacts
- Whether the proposal results in restoration of hydrologic conditions and functions of the source watershed

Response: Comment noted.

Comment 53: [Water Supply Criterion 3](#) requires that the “proposal is consistent with an approved water supply service area plan under s. 281.348 that covers the public water supply system.” However, [Section 281.348\(3\)\(b\)2](#) requires that “[a]pproval of a plan by the governing body of each city, village, and town whose public water supply is addressed by the plan before the plan is submitted to the department” (emphasis added). How does the WDNR plan to meet these statutory requirements?

Response: The City of Waukesha has contacted the Towns of Waukesha, Delafield, and Genesee, as well as the City of Pewaukee regarding areas within those jurisdictions lying within the proposed water supply service area for the City of Waukesha. As part of the Technical Review, the WDNR must evaluate a number of factors related to the water supply service area delineation and the water supply service area plan. Before the WDNR approves a final water supply service area for the City of Waukesha, each jurisdiction with land lying within that service area must have approved of the plan as it affects that jurisdiction.

Comment 54: Concerns expressed that if someone wants Milwaukee water that they should move to Milwaukee.

Response: Comment noted.

Conservation

Comment 55: The WDNR must ensure that the demonstrated savings from the implementation of the required practices (Tiers 1-3 for a diversion) have been factored into Waukesha’s projected need.

Response: Waukesha's water conservation plan and the proposed diversion amounts will be reviewed to determine if the required conservation and efficiency measures have been implemented, or have been proposed to be implemented, and whether the requested diversion amount is reasonable. The WDNR will analyze water use at similarly situated communities in Wisconsin and the Great Lakes region to provide reference points for Waukesha's current and proposed water use. See [Water Supply Criteria 2 and 4](#).

Comment 56: The City of Waukesha would have adequate water supplies of potable water if they conserve their existing water supplies. They should employ water conservation techniques including: minimizing lawn and golf course watering, maximizing rainwater and snow harvesting, and graywater reuse, leak detection and repair, etc.

Response: The WDNR will review the information provided by the City of Waukesha as part of the draft Technical Review and draft EIS to determine if the City of Waukesha has met [Water Conservation Criteria 1 and 2](#). WDNR will assess the amount of water currently saved by the City of Waukesha's water conservation efforts and estimate what could be reasonably saved through the use of environmentally sound and economically feasible water conservation and efficiency measures that are allowable under current state law.

Comment 57: Does the City of Waukesha need to account for water losses that occur within their water supply system due to leaking water supply pipes (laterals and mains)? What is the City doing to determine the extent of this problem within their water supply system? If the City fixed all of their leaks, how much water would this save? Will the City of Waukesha be required to repair leaks within their water supply and sewer systems as part of the application?

Response: A water audit and leak detection program are required by ch. [NR 852](#). The draft Technical Review and draft EIS will determine if the City of Waukesha's application meets the [NR 852](#) standards. See [Additional Criterion 2](#).

Comment 58: Waukesha's request fails to include an analysis of the elasticity of demand in its application; that is, an analysis of how demand will be affected by the higher cost of water. Professor William Holanhan, Chair of the University of Wisconsin – Milwaukee Department of Economics, noted that employing elasticity of demand analysis and pricing programs could result in significant reductions in water use. If reducing water use would occur due to the inclining cost of water, then this reduction should be included in the WDNR's assessment of the amount of water the City of Waukesha needs. The reasonableness of any diversion amount cannot be estimated without estimating the amount that will be demanded at alternative prices per unit.

Response: WDNR will be doing a demand analysis based on rate changes in the City of Waukesha. In coordination with the [Wisconsin Public Service Commission \(PSC\)](#), WDNR will review possible rate scenarios and determine the most likely impact those rates will have on actual demand.

Comment 59: The WDNR should assess Waukesha's progress in implementing two goals from its 2006 water conservation plan: (1) "protect source water areas to conserve limited available public water supplies" and (2) "protect stormwater recharge areas to help replenish groundwater resources." This analysis will help WDNR determine whether the conservation measures utilized by the city have helped to lessen impacts on the current water supply.

Response: The City of Waukesha 2006 Water Conservation and Protection Plan and supplemental April 2011 Response to WDNR document states that the plan is based on the following three primary goals:

1. Reduce water use to conserve limited available public water supplies.
2. Protect source water areas to ensure water sources are protected from pollution.
3. Protect stormwater recharge areas to help replenish groundwater resources.

Waukesha's 2006 water conservation plan and more recent updates will be reviewed for compliance with ch. [NR 852](#) and all applicable state laws. The water conservation plan also outlines components to protect water sources and to protect stormwater recharge areas as implementing mid- and long-term goals. Activities related to implementing the goals are presented in the 2006 water conservation plan, along with supplemental information in the [Application for Lake Michigan Water Supply](#) and the 2010 SEWRPC Report No. 52, [A Regional Water Supply Plan for Southeast Wisconsin](#). The WDNR will review the aforementioned references and other related sources as part of the draft EIS and draft Technical Review process.

Comment 60: The City of Waukesha is required to establish and publicize a program to complete commercial and industrial customer water use audits and leak surveys upon customer request based on high or aberrant water use. The City of Waukesha is also required to conduct a technical assessment to evaluate the feasibility of water reuse in the operation of the facility and to implement water reuse projects identified by the assessment and allowed under current state law.

Response: These are two conservation and efficiency measures that the City of Waukesha is required to implement as a part of the City's water conservation plan submitted with its application for diversion of Lake Michigan water. WDNR will review the submitted water conservation plan and supplements to determine if these specific requirements have been met.

Comment 61: Concerns were expressed that the City of Waukesha cannot meet their water supply needs by conservation alone. The City of Waukesha has already implemented a public education program, a sprinkling ban, a toilet rebate program, and an inclining residential rate structure (while also increasing the water rates of commercial and industrial customers a larger percentage than residential customers). The City also created the Waukesha County Water Conservation Coalition. These efforts have lowered the total water usage by 31% between 1988 and 2008. The City estimates that another 10% water savings could be realized through implementation of their water conservation and protection plan.

Response: [Water Supply Criterion 1](#) requires communities in straddling counties requesting a diversion of Great Lakes water to show that there "is no reasonable water supply alternative within the watershed in which the community is located, including conservation of existing water supplies..." The WDNR will review Waukesha's water conservation and protection plan in light of this criterion. WDNR will evaluate the plan to determine whether the implemented and proposed conservation and efficiency measures are reasonable and will determine whether additional measures or increased scope of implemented and proposed measures are necessary. The WDNR will analyze water use at similarly situated communities in Wisconsin and the region to provide reference points in regard to Waukesha's current and proposed water use. Furthermore, in accordance with Water Conservation Criterion 2, Waukesha's application must also show that they have committed "to implementing the applicable water conservation measures under sub. (8) (d) that are environmentally sound and economically feasible for the applicant." WDNR will review Waukesha's water conservation and protection plan to determine whether they met the requirements found in ch. [NR 852](#), Water Conservation and Water Use Efficiency. Conservation and efficiency measures that are environmentally sound and economically feasible must be implemented.

Comment 62: There were several comments made concerning the WDNR's ability to require specific water conservation measures as a condition of the WDNR's approval to divert water from the Great Lakes.

Response: If the WDNR ultimately approves the diversion application after Regional Body and Great Lakes Council approval, the diversion approval will contain conditions that the City of Waukesha must meet the requirements of Tier 3 water conservation and efficiency measures, which will be enforceable by the WDNR. The WDNR will review the information provided by the City of Waukesha as part of the Technical Review to determine if the application has met requirements found in ch. [NR 852](#). The draft Decision may include conditions necessary to meet Great Lakes Review Criteria and other applicable laws. See [Water Conservation Criteria 1 and 2](#).

Comment 63: The WDNR must evaluate whether the City of Waukesha and the other jurisdictions currently included in the planned service area have implemented all of the water conservation practices required by the Great Lakes Compact and Wisconsin's implementing language.

Response: WDNR's Technical Review will include the review of conservation and efficiency measures implemented and proposed to be implemented by all jurisdictions in the planned service area.

Comment 64: Will the EIS and draft Technical Review discuss the potential economic and environmental benefits attendant to the discontinuation of the use of household water softening devices (such as reducing the amount of chloride discharged)?

Response: The EIS and Technical Review will consider the amount of water that will be saved by discontinuing water softener use as well as the reduced discharge of chlorides due to the disconnection of household water softeners. The EIS and Technical Review will not look at the economic benefit of disconnecting household water softeners.

Comment 65: Water conservation measures must be implemented fully by homeowners and businesses.

Response: The WDNR's authority, in this case, extends to the City of Waukesha, but not to individual homeowners or businesses.

Comment 66: The City of Waukesha implemented a sprinkling ordinance to reduce peak demand and reduce overall average day demand. The result was a 15% decrease in summer watering season water use.

Response: WDNR will assess the amount of water saved by the City of Waukesha's water conservation efforts and what could be reasonably saved through the use of environmentally sound and economically efficient water conservation measures. This assessment will be included within the draft Technical Review.

Comment 67: The WDNR needs to educate the public about water conservation.

Response: The WDNR understands that careful stewardship of water resources through water conservation and efficient use is critical to protecting the abundance and uses of water within the State. In 2011, ch. [NR 852](#), Wis. Admin. Code took effect to implement water conservation and efficiency requirements called for by [Chapter 281.346](#), Wis. Stats., and by Great Lakes Compact. The WDNR administers a [statewide water conservation program](#) in cooperation with the [Wisconsin Public Service Commission \(PSC\)](#) and [Department of Safety and Professional Services](#). However, this comment is outside of the purview of the WDNR's review of the City of Waukesha's application to request a diversion of Great Lakes water.

Comment 68: What water savings documented from the start of Waukesha's water conservation program can be tied directly to the City's conservation measures as distinct from, for example, any increase in precipitation or declining industrial users?

Response: WDNR will assess the amount of water saved by the City of Waukesha's water conservation efforts and what could be reasonably saved through the use of environmentally sound and economically efficient water conservation measures. This assessment will be included within the draft Technical Review.

Comment 69: What monitoring and enforcement measures will be implemented to assure achievement of projected conservation goals?

Response: The City of Waukesha will be required to annually report to the WDNR and [PSC](#) on the implementation of their water conservation plan. In addition, WDNR will receive monthly water withdrawal information through annual water use reporting and have access to annual reports on sales by customer class reported to PSC. If the City of Waukesha were out of compliance with ch. [NR 852](#) or failed to meet the conditions of its diversion approval, the WDNR would enforce the applicable provisions of any diversion approval, pursuant to WDNR's authority under s. 281.346(14), Wis. Stats.

Return Flow

Comment 70: The WDNR should create an oversight committee to provide guidance in the planning for, operation of and monitoring of the return flow. The committee should be comprised of representatives of agencies and units of government most directly affected including:

- WDNR
- Milwaukee County
- Racine County
- Waukesha County
- Milwaukee Metropolitan Sewerage District
- City of Waukesha Water Utility
- SEWRPC
- Local units of government

Response: Comment noted.

Comment 71: The above mentioned oversight committee could help guide the assessment of the environmental impacts of the return flow options that is included in the draft EIS and draft Technical Review.

Response: Comment noted.

Comment 72: The WDNR should require that each of the impacted communities submit a formal resolution approving the return flow location.

Response: The WDNR has no statutory authority to require this.

Comment 73: Concerns were expressed that implementation of a TMDL could negatively impact businesses that currently discharge to the waterbodies listed as potential return flow locations by the City of Waukesha, including Milwaukee businesses.

Response: The Department will analyze the impacts of a potential [Total Maximum Daily Load](#) (TMDL) based upon the information available at the time of the review.

Comment 74: The City of Waukesha's application failed to consider sending effluent to MMSD for processing, which would include storage during weather events. The draft EIS should look into the validity of this option that was discounted by the City of Waukesha, as it could decrease the length of pipeline construction, reduce environmental impacts, and potentially reduce costs associated with waste water treatment.

Response: The City of Waukesha's May 2010 diversion application (at pp. 5-22 to 5-23) discussed the City's analysis of return flow options through the Milwaukee Metropolitan Sewerage District (MMSD). The City did not recommend a MMSD return flow alternative "because the cost exceeded that of return flow directly to Lake Michigan and to a Lake Michigan tributary." For this and other reasons, the City did not further evaluate a MMSD return flow option. As part of the Technical Review process, the WDNR will review the City's analysis and conclusions. The EIS will also include an evaluation of alternatives to the proposal, including a rigorous exploration and objective evaluation of the potential environmental impacts of all reasonable alternatives, particularly those that might avoid all or some of the adverse environmental effects of the proposed action, as required under [NR 150.22\(2\)\(e\)](#) and [NR 150.02\(2\)](#), Wis. Adm. Code.

Comment 75: Concerns expressed that the water diverted from the Great Lakes basin by the City of Waukesha should be returned directly to the Great Lakes or as close as practicable to the place at which the water is withdrawn, unless that would not be cost effective, environmentally sound or, in the interest of public health.

Response: [Return Flow Criterion 3](#) states that the place at which the diverted water is returned should be "as close as practicable to the place at which the water is withdrawn, unless the applicant demonstrates that returning the water at the place is one of the following: not economically feasible, not environmentally sound, not in the interest of public health." Within the draft EIS and draft Technical Review, the WDNR will analyze the City of Waukesha's application to determine if their proposed alternatives met this criterion and other applicable laws.

Comment 76: Comments were made that the WDNR should require that all areas of the Towns of Genesee and Waukesha that receive Great Lakes water also be included in the City of Waukesha's sewer service area as a condition of receiving Great Lakes water.

Response: Comment noted.

Comment 77: The effects of the City of Waukesha's proposal on any national or state parks adjoining or surrounding Lake Michigan should be studied.

Response: As part of the draft Technical Review and draft EIS, the WDNR will evaluate reasonably foreseeable environmental impacts caused by of the City of Waukesha's proposed return flow locations.

Comment 78: The proposed return flow to Underwood Creek will not cause additional flooding along Underwood Creek or the Menomonee River, nor will this shift have a significant impact on the Fox River.

Response: The WDNR is currently collecting and analyzing information concerning potential environmental impacts presented both by the City of Waukesha and by other credible sources. Within the draft EIS and the draft Technical Review, the WDNR will make its own independent assessment of the potential environmental impacts expected by the City of Waukesha's proposed return flow plan.

Comment 79: Each alternative that the City of Waukesha proposed met the Compact requirements. Underwood creek was properly selected, because it protects public health, follows already-disturbed corridors, avoids environmental recourse, is consistent with the alignment recommended by [Southeastern Wisconsin Regional Planning Commission](#) (SEWRPC), will allow the return flow to provide an environmental resource benefit within the creek, and is the least costly alternative.

Response: The WDNR is currently collecting and analyzing information concerning potential environmental impacts presented both by the City of Waukesha and by other credible sources. Within the draft EIS and the draft Technical Review, the WDNR will make its own independent assessment of the potential environmental impacts expected by the City of Waukesha's proposed return flow plan.

Comment 80: The EIS should evaluate the water quality and human health impacts of returning the Great Lakes water to Waukesha's proposed return flow alternatives. The EIS should discuss the potential range of the types of contaminants (bacteria, phosphorous, mercury, chloride, and so on) in the discharge, the estimated mass and concentrations in the discharge, whether such contaminants meet applicable water quality standards, and even if they do, whether there are any other potential adverse impacts from the discharge on water quality. Given that Underwood Creek is a waterway that is already on both the state and federal impaired waters list for bacteria, bacteria (specifically fecal coliform) should be evaluated both in the context of potential exposure to users of Underwood Creek, as well as downstream waterbodies such as the Menomonee River and Lake Michigan. Waukesha's discharge of fecal coliform is currently 9 times higher than [MMSD](#)'s maximum discharge limits set for contractors (900cfu/100ml) and 20-30 times higher than actually monthly effluent concentrations achieved by MMSD.

Response: Within the draft Technical Review and the draft EIS, the WDNR will analyze the effects on surface water resources of the proposed return flow options including the physical, chemical and biological impacts to determine if the City of Waukesha has met [Return Flow Criteria 4 and 5](#). The City of Waukesha will also need to obtain all applicable discharge permits.

Comment 81: Concerns were expressed that the cumulative impacts of changing Underwood Creek or Root River's flow regime must be examined within the EIS. These impacts potentially include:

- Changes to FEMA maps and floodplain zoning
- Development restrictions caused by the expansion of the floodplain, floodway or flood fringe
- Increase in sump pump usage
- Property damage (to Hart Park, County Parks, etc.) caused by flooding
- Stream bank erosion or channel scouring
- Increases in turbidity and sediment loading
- Increases in baseflow
- Degradation of riparian habitat
- Making it harder to restore portions of stream corridor
- Changes in reasonable recreational uses

The City of Waukesha's proposed discharge to the Root River would be almost double the current average baseflow. The average flow on the Root River is 8.8 cubic feet per second (cfs), which is 5.6 million gallons per day (mgd). Concerns were also expressed that the EIS must also include potential costs associated with these impacts.

Response: The draft EIS and draft Technical Review will include an analysis of the reasonably foreseeable impacts to the physical, chemical and biological integrity of the receiving waters caused by the City of Waukesha's proposed return flow locations as required by Return Flow Criterion 5. Within the draft EIS, the WDNR will also include an analysis of any reasonably foreseeable socioeconomic impacts, as required by [s. 1.11\(2\)\(c\)6](#), Stats., and [NR 150.22\(2\)\(d\)](#), Wis. Adm. Code.

Comment 82: Concerns were expressed over potential flooding and basement backups caused by returning waste water to Underwood Creek. Specifically, concerns were expressed over the fact that Elm Grove and the City of Wauwatosa have suffered multiple flooding events in the Village of Elm Grove, in Hart Park and in the downtown Wauwatosa area and that countless dollars have been spent on special pumps to help with flood water problems, on housing removal from flood prone areas, and on building huge retention ponds to absorb water over in times of high water.

Response: The draft EIS will also include an analysis of any reasonably foreseeable socioeconomic impacts, as required by [s. 1.11\(2\)\(c\)6](#), Stats., and [NR 150.22\(2\)\(d\)](#), Wis. Adm. Code.

Comment 83: Concern that the additional flow within Underwood Creek may impact the implementation of best management practices (BMPs) that may be needed to meet other statutory requirements relating to stormwater quantity and quality.

Response: The draft EIS and draft Technical Review will include an analysis of the reasonably foreseeable impacts to the physical, chemical and biological integrity of the receiving waters caused by the City of Waukesha's proposed return flow locations as required by Return Flow Criterion 5. Within the draft EIS, the WDNR will also include an analysis of any reasonably foreseeable socioeconomic impacts, as required by [s. 1.11\(2\)\(c\)6](#), Stats., and [NR 150.22\(2\)\(d\)](#), Wis. Adm. Code.

Comment 84: The EIS should be organized so that there is a separate section that focuses on the discharge impacts to Underwood Creek. The public should not be required to piece together those impacts from reading the individual sections on surface water resources, wetland resources, and geomorphology.

Response: The DNR intends to create the draft EIS in a fashion that will allow members of the public to more easily make comparisons between the various return flow alternatives proposed by the City of Waukesha.

Comment 85: Does returning water to the Fox River at times of possible flooding violate the Great Lakes Compact?

Response: [Return Flow Criterion 2](#) states that the "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." Within the draft Technical Review, the WDNR will assess whether or not the City of Waukesha has met this criterion.

Comment 86: Who will determine when water is to be sent to the Fox River to prevent flooding from Underwood Creek?

Response: According to the City of Waukesha's application, flow would be switched from Underwood Creek to the Fox River when Underwood Creek reaches the 2-year flood stage as determined by a [USGS](#) water monitoring gauge. The mechanism for switching the flow would be under the control of the City of Waukesha's municipal sewage treatment plant. Within the draft Technical Review, the WDNR will

analyze if this return flow option meets statutory requirements. The WDNR also reserves the authority to place conditions on the draft Decisions and associated permits, if deemed necessary to meet applicable laws.

Comment 87: What waterbody will the Waukesha Water Utility discharge to if both Underwood Creek and the Fox River are at or above the 2 year flood stage?

Response: The City has not proposed to stop discharging to the Fox River when the Fox River is at or above the 2-year flood stage. If Underwood Creek is at or above the 2-year flood stage, the City proposes to discharge all of the effluent to the Fox River.

Comment 88: When extremely dry weather occurs and people on the Fox River complain that the river is too low, could the WDNR order water to the Fox River?

Response: No. [Water Supply Criterion 1](#) states that the WDNR may approve a proposal for a "... new diversion or an increase in a diversion if the water diverted will be used solely for public water supply purposes in a community within a straddling county...". This would not be a public water supply purpose under the Great Lakes Compact. In addition [Return Flow Criterion 2](#) states "An amount of water equal to the amount of water withdrawn from the Great Lakes Basin will be returned, less an allowance for consumptive use."

Comment 89: Concerns expressed that the draft EIS should address the environmental impacts on the Fox River of not returning all of the City of Waukesha's wastewater to the Fox. These impacts should include those fish species that depend on shallow ponds within the Fox River.

Response: The draft EIS will include an evaluation of the probable environmental consequences of the City of Waukesha's proposal including positive and negative effects on the physical, biological, and socioeconomic environment as is required under [NR 150.22\(2\)\(d\)](#). This will include an evaluation of the potential environmental impacts of not returning water to the Fox River.

Comment 90: In April of 2009, one inch of rain caused minor flooding at Hart Park. In June 2009, three plus inches of rain caused severe flooding of Hart Park.

Response: Comment noted.

Comment 91: If concrete is removed from 124th Street to Mayfair Road, what protection would be given to assure Underwood Creek would not flow or overflow into the old creek bed along the area between Diane Dr and old Scout Camp Journal? If this area floods, could the railroad bridge within this area be damaged?

Response: The WDNR will analyze the environmental impacts of the various return flow options proposed by the City of Waukesha within its application and will include this analysis within the draft Technical Review and draft EIS.

Comment 92: Will all deep aquifer wells within the City of Waukesha that discharge their water to the Waukesha Water Utility be required to be abandoned (formally filled and sealed)? Or will the City of Waukesha be allowed to discharge radium-laced water to Lake Michigan?

Response: The City may decide to maintain deep aquifer wells as an emergency back-up water supply if the City's diversion application is approved. Under s. [NR 810.22](#), Wis. Adm. Code, the City could enter into an agreement with the WDNR to operate a deep aquifer well as an emergency water supply well

when the Lake Michigan water supply is unavailable. While the levels of radium in the water from emergency wells may exceed the radium standard, use of these wells on an emergency basis would not be a violation of Safe Drinking Water Standards. This is because violations are based on an annual average of radium concentrations in drinking water provided to consumers. Public notice to consumers for use of wells that provide water exceeding the radium standard would be required under Chapter [NR 810.22](#).

Comment 93: The City of Waukesha should be required to meet current phosphorous, chloride and mercury standards if they are allowed to discharge to a Lake Michigan tributary. The costs of achieving these standards should be included in the costs associated with the return flow alternatives.

Response: The WDNR will evaluate the City of Waukesha's proposed return flow alternatives based on [Return Flow Criterion 4](#) which states that "the returned water will be treated to meet applicable permit requirements under [s. 283.31...](#)" and [Additional Criterion 2](#) which requires the diversion to be in compliance with all applicable local, state and federal laws.

Comment 94: The City of Waukesha's waste water discharges will no longer contain radium if the City of Waukesha's request for a diversion of Lake Michigan water is approved.

Response: Comment noted.

Comment 95: The EIS should ensure that the cumulative effects analysis consider other proposed impacts to Underwood Creek (and other proposed options for return flow) from projects such as the Wisconsin Department of Transportation's reconstruction of the I-94 Zoo Interchange Project. The Zoo interchange project is anticipated to increase stormwater runoff by 33% to area creeks including Underwood Creek and Honey Creek. In addition, we have recently learned about potential construction of an ATC transmission line along Underwood Creek (between Mayfair and Bluemound Roads in Wauwatosa), which would require decimation of an 80 foot swath of adjacent wetland vegetation between 115th Street and Bluemound Road (which could significantly decrease flood storage and increase flows to the Creek). These projects, alone and together, are likely to create individual and cumulative effects such as increased risk of flooding of homes along Underwood Creek, which should be analyzed and addressed as part of the EIS and in keeping with the Compact.

Response: The EIS will evaluate potential environmental effects and potential cumulative environmental effects of the proposed project as required under [s. 1.11\(2\)\(c\)](#), Stats., and [NR 150.22\(2\)](#), Wis. Adm. Code.

Comment 96: The City of Waukesha should build a stormwater basin so that it could avoid having to discharge to the Fox River during peak flows. This would allow them to return all water to the Great Lakes basin.

Response: The EIS will include an evaluation of alternatives to the proposal, including a rigorous exploration and objective evaluation of the potential environmental impacts of all reasonable alternatives, particularly those that might avoid all or some of the adverse environmental effects of the proposed action, as required under [NR 150.22\(2\)\(e\)](#), Wis. Adm. Code.

Comment 97: Return flow alternatives should be practically foolproof before this application is approved.

Response: The EIS will include an evaluation of alternatives to the proposal, including a rigorous exploration and objective evaluation of the potential environmental impacts of all reasonable alternatives,

particularly those that might avoid all or some of the adverse environmental effects of the proposed action, as required under [NR 150.22\(2\)\(e\)](#), Wis. Adm. Code.

Comment 98: If the City of Waukesha obtains Lake Michigan water, its return flow water quality will exceed the discharge requirements stipulated by the Wisconsin Pollutant Discharge Elimination System and will prevent introduction of invasive species into Lake Michigan, regardless of which return flow location is ultimately selected. The Lake Michigan option will have no discernable adverse effect on the lake itself, because contributions of fecal coliform, total suspended solids, all suspended solids, and phosphorous are minimal.

Response: The WDNR is currently collecting and analyzing information concerning potential environmental impacts presented both by the City of Waukesha and by other credible sources. Within the draft EIS and the draft Technical Review, the WDNR will make its own independent assessment of the environmental impacts that may result from the City of Waukesha's proposed return flow plan.

Comment 99: The City of Waukesha's proposal will positively benefit Underwood Creek because the return flow will supplement baseflow during dry periods and only contribute a minor portion during wet period flow. Furthermore, increased baseflow may improve fish habitat and movement, and decrease suspended solid concentrations. The Underwood Creek return flow option will impact wetlands the least of any alternative. It will only temporarily impact 5 to 9.4 acres of wetlands.

Response: The WDNR is currently collecting and analyzing information concerning foreseeable environmental impacts presented both by the City of Waukesha and by other credible sources. Within the draft EIS and the draft Technical Review, the WDNR will make its own independent assessment of the potential environmental impacts expected by the City of Waukesha's proposed return flow plan.

Comment 100: The City of Waukesha's proposal to return 100% of the volume of water diverted exceeds the standards set forth in the Great Lakes Compact.

Response: Comment noted. [Return Flow Criterion 2](#) states "An amount of water equal to the amount of water withdrawn from the Great Lakes Basin will be returned, less an allowance for consumptive use."

Comment 101: The EIS should examine who would be responsible for monitoring the effects of Waukesha's return flow effluent on downstream waterways – including effects on water quality, streambank stability, sediment transport, and wildlife, including provisions for how return flow strategies could be altered in the future to allow for adaptive management.

Response: The EIS will discuss the state, federal, local and tribal authorities involved with the proposed project, but the EIS provides no authority to require monitoring or control environmental effects.

Comment 102: Does the City of Waukesha's preferred return flow location, Underwood Creek, meet the requirement that the "place at which the water is returned to the source watershed is as close as practicable to the place at which the water is withdrawn, unless the applicant demonstrates that returning the water at that place is one of the following: not economically feasible, not environmentally sound, or not in the interest of public health"? Does the City of Waukesha's proposal "maximize the amount of water withdrawn from the Great Lakes St. Lawrence River basin that will be returned to the source watershed and minimize the amount of water from outside the basin that will be returned to the source watershed"?

Response: Within the draft Technical Review, the WDNR will assess whether or not the City of Waukesha's proposed water supply and return flow alternatives have met [Return Flow Criteria 1 and 3](#).