



Illinois Lake Michigan Water Allocations

Between 1848 and 1922, several canals were constructed in northeastern Illinois to direct wastewater discharges to area waterways away from the region's primary source of drinking water, Lake Michigan. While these projects were highly effective in reducing discharges of Chicago wastewater to the lake, they were also controversial given their reliance on the transfer of water from the Great Lakes watershed to the Mississippi River watershed. Early on, downstream communities such as St. Louis raised concerns regarding the potential health impacts of the diverted flow. Subsequently, several Great Lakes states protested the diversion of water out of the basin and its potential impacts on the lake system.

These issues resulted in multiple lawsuits, extensive litigation, and eventually decisions from the United States Supreme Court. In 1980, an amendment to a 1967 Supreme Court Decree set a limit of 3,200 cubic feet per second (cfs) based on a 40-year running average as the amount of water that Illinois can divert from Lake Michigan. In response to the ruling, Illinois passed the LEVEL OF LAKE MICHIGAN ACT [615 ILCS 50] and established the Lake Michigan Water Allocation Program. Rules governing the management of the allocation program are defined in the Illinois Department of Natural Resources (IDNR) Part 3730 Rules on ALLOCATION OF WATER FROM LAKE MICHIGAN.

The water that Illinois diverts from Lake Michigan includes three components:

- Domestic Water Supply - Lake Michigan water is used as the primary source of water supply for communities and industries throughout northeastern Illinois. Multiple Illinois communities along Lake Michigan operate intakes and water treatment plants to produce high quality drinking water. That water is then conveyed inland through networks of pumping stations, storage facilities, and water transmission mains to serve communities throughout the region.
- Direct Diversion – Water from Lake Michigan is also diverted to maintain a safe depth for navigation along the Sanitary and Ship Canal system and to improve water quality in the canal system. Direct diversions are managed through the operation of facilities at the Wilmette Pumping Station on the North Shore Channel, at the Chicago River Controlling Works near downtown Chicago, and at the Thomas J. O'Brien Lock and Dam on the Calumet River.
- Stormwater runoff – As a result of the construction of the canal system and reversal of the Chicago and Calumet Rivers, stormwater runoff from an area of approximately 673 square miles is also diverted away from Lake Michigan.

The IDNR manages diversions for domestic water supply and direct diversion through its allocation program, while the U.S. Army Corps of Engineers has responsibility for performing investigations and accounting to monitor the amount of water diverted on an annual basis. The most recent accounting available shows that Illinois' annual diversion has averaged less than 2,800 cfs per year over the past 20 years, leaving an average surplus of nearly 270 million gallons per day of water available within the authorized diversion amount.

Under the Lake Michigan Water Allocation Program, every water system in Illinois that uses Lake Michigan water must have its own allocation permit from the IDNR. This requirement applies regardless of whether the system withdraws and treats the water itself or purchases treated water from another system. And, in Joliet's case the same permitting process will be required regardless of the City's final choice between the Lake Michigan – Chicago Department of Water Management alternative and the Lake Michigan – New Indiana Intake alternative. While Illinois is a party to the Great Lakes – St. Lawrence River Basin Water Resources Compact, the Compact explicitly states, and both IDNR and the Indiana Department of Natural Resources have confirmed, that diversions under the State of Illinois' allocation program are governed by the U.S. Supreme Court decrees relevant to Illinois' program.



Currently, a total of 218 Illinois water systems have domestic water supply allocations from IDNR. To obtain an allocation permit for a new domestic water supply from Lake Michigan, Joliet must prepare and submit to the IDNR an application that includes basic information on the entity and its service area, a description of the types of customers that will use the water, a description of the water system infrastructure that will be used to obtain and distribute water, a description of the entity's existing sources of water, an explanation of the basis for the entity's future water needs, and a description of current and proposed measures to provide for the conservation and efficient use of the water supply.

In evaluating allocation permit applications, the IDNR considers multiple factors including the adequacy of supplies other than Lake Michigan and the costs associated with various supply alternatives for the entity. However, reducing pumping of groundwater from the deep aquifer in the region is a primary objective of the allocation program, and IDNR has indicated that deep well communities such as Joliet that are requesting a Lake Michigan water allocation do not have to demonstrate that utilizing Lake Michigan water is the lowest cost option available. Given the continued decline in groundwater levels around Joliet, efforts to promote reduced dependence on the deep aquifer are recognized as important for the region.

As part of the application process, the IDNR will also require Joliet to demonstrate a strong commitment to the efficient use of water in the community through the adoption of specific water conservation measures, and the implementation of a formal plan for reducing the level of non-revenue water (NRW) in its system. Non-revenue water is defined by the IDNR as the difference between the amount of water input to a water system and the amount of billed, authorized consumption by water customers. Lake Michigan allocation permittees are required to limit their non-revenue water to less than 10% of net annual pumpage, or to submit to the IDNR a structured plan of action and timetable for complying with the 10% requirement. Joliet is already working aggressively to promote water conservation practices across the community and has already begun to implement a non-revenue water reduction plan which includes increased water main replacement and water loss management efforts needed to meet the 10% non-revenue water standard within 20 years.

Joliet is currently working to prepare its application for a Lake Michigan water allocation permit. City staff and members of the Consultant Team participated in a pre-application meeting with IDNR in May and are assembling the documentation needed to support the application. Once Joliet's application is submitted to the IDNR, the agency will schedule a public hearing on the request and provide notice to all existing permittees, identified stakeholders, and the general public through mailings and notices in area newspapers. A Hearing Officer will conduct the hearing and oversee Joliet's presentation of its basis for the allocation request as well as comments or questions regarding the application presented by other parties. Upon completion of the hearing, the Hearing Officer will document his/her findings and submit a recommended order to the IDNR Director for final approval.

References:

Lake Michigan Water Allocation. Illinois Department of Natural Resources website.

<https://www2.illinois.gov/dnr/WaterResources/Pages/LakeMichiganWaterAllocation.aspx>

Water Management and Diversion Accounting Activities – 2019 Annual Report (October 2018 – September 2019).

U.S. Army Corps of Engineers, Hydrology and Hydraulics Section, Design Branch, Technical Services Division, Chicago District. October 2019.

Findings of the Eighth Technical Committee for Review of Diversion Flow Measurements and Accounting

Procedures. Lake Michigan Diversion Committee. United States Army Corps of Engineer, Chicago District. May 2019.

Illinois Administrative Code, Title 17: Conservation, Chapter I: Department of Natural Resources, Subchapter h: Water Resources. Part 3730 Allocation of Water from Lake Michigan. November 18, 2014.

Bruce Barker. *Lake Diversion at Chicago*. Case Western Reserve Journal of International Law. Volume 18, Issue 1. 1986. Available at <https://scholarlycommons.law.case.edu/jil/vol18/iss1/10>