



The City of Joliet's existing water source, the deep groundwater aquifer, will be depleted to the point of not being able to meet the City's maximum day water demands by the year 2030.

This is a regional problem. Groundwater modeling conducted by the Illinois State Water Survey indicates that the deep groundwater wells in Joliet and neighboring communities will someday be depleted to the point of no longer being able to supply the region's future water demands.

Knowing this, the City of Joliet embarked on this Alternative Water Source Study to determine alternative water sources which could be used by not only the City of Joliet, but possibly the region as a long-term, sustainable, reliable water source.

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finding a **NEW WATER SOURCE**

two **PHASES**

JULY 2018
PHASE I
BEGINS

The Alternative Water Source Study began in July of 2018 and has been completed in two phases. Fourteen alternatives were evaluated in the Phase I Study. These fourteen alternatives covered the full range of possible water sources including groundwater, rivers and Lake Michigan. The Phase I Study was completed in January 2019 and recommended five alternatives for further evaluation as feasible alternative water sources.

JAN 2019
PHASE I
ENDS

PHASE II
BEGINS

The Phase II Study took a deeper look into the five alternatives in order to determine the improvements that would be required to implement each alternative. Variations of the five alternatives were also included in the evaluation. The alternatives included Illinois River, Kankakee River, Lake Michigan Water – Chicago Department of Water Management (CDWM), Lake Michigan Water – DuPage Water Commission*, and Lake Michigan Water – New Indiana Intake.

JAN 2020
PHASE II
ENDS

Water infrastructure improvements evaluated for each alternative included: raw water intake and pumping, raw water transmission, raw water treatment, finished water pumping and storage, finished water transmission, receiving station at a Joliet water site, Joliet distribution system modifications, storage in the Joliet water system and back-up water sources. Phase I and Phase II Studies are available on the website at

*Per a letter dated December 4, 2019 from the DuPage Water Commission, they do not want to be considered as an alternative water source supplier for the City of Joliet. Therefore, the evaluation for this option has been removed from the Phase II study.

goals & **OBJECTIVES**

This project serves as a new starting point in the City's effort to obtain a sustainable water supply in quantity and quality for the City of Joliet and, possibly, surrounding communities. **The objective of the study was to consistently apply engineering best practices to allow for an unbiased comparison of the alternatives.** The study was prepared in an open and transparent manner by a project team which included subject matter experts from each of the water source types under consideration under the guidance and direction of the City's Environmental Commission. The study involved considerable stakeholder engagement including monthly Environmental Commission meetings, three joint workshops between the Joliet City Council and Environmental Commission, presentations at neighborhood meetings, development of a project specific website, attendance at local events, E-blasts and social media. **The goal of the project was to present the total water costs and non-cost considerations for water source alternatives that meet the City's 2050 water demands and water quality goals.** This study was essential to allow the City to make a sound decision when selecting an alternative water source that will be reliable and sustainable for Joliet now and in the future.

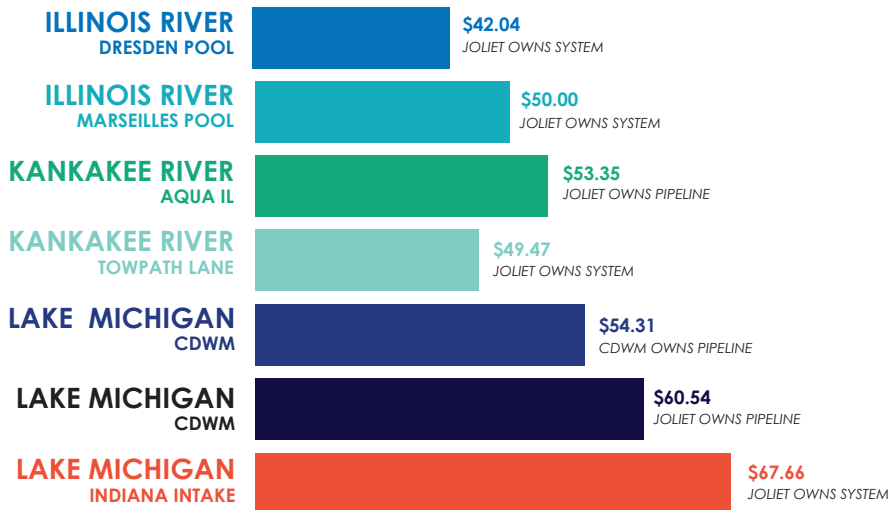
water COST

Cost is a critical factor in the evaluation of Joliet's water supply alternatives. A total cost of water analysis that includes potential water purchase costs, capital improvement costs, operating and maintenance costs, and financing costs is required to provide a comprehensive basis for comparison of the financial impact that each alternative would have on the City of Joliet.

A structured approach built around well-defined components has been used to facilitate the development of the total cost of water for the water source alternatives. The chart below provides an illustration of the likely impact of each water source alternative on a typical residential water bill in 2030. Note a monthly utility bill also includes sewer and garbage fees. The information below only applies to the water portion of the bill.

ESTIMATED INCREASE IN AVERAGE WATER BILL (7HCF)

Current average monthly bill is \$30.75.



Cost estimates have been compiled and presented by the City of Joliet Staff and its consultant team. All costs are conceptual in nature and should only be used for comparison purposes as related to the Joliet Alternative Water Source Study. See the Phase II Study Report and the corresponding Phase II Questions and Answers as support for cost estimates.

As the selection of a new water source is critical for the City of Joliet, it is important to differentiate alternatives by more than just the resulting increase in monthly water bills. In addition to cost, there are several criteria that the City will consider when making this decision including raw water quality, sustainability/water quantity, implementation risk, operation & maintenance, and control (governance).

CONCLUSIONS

As we consider the merits of each of the alternative water sources, we have to keep in mind that there is no perfect alternative. At this conceptual stage of the project, there is still significant effort required to fully develop whichever alternative is selected. Given that unknowns still exist with all of the options, it is recommended that the City select

a primary alternative and secondary alternative, both of which could be further evaluated during preliminary design.

This is just a brief introduction of the alternative water source evaluation. The complete analysis including detailed discussion of evaluation criteria and City Staff's recommendations can be found in the Executive Summary and full Draft Final Report on the project website at RethinkWaterJoliet.org.

selection SCHEDULE

In order to have a new source of water online by 2030, it is critical that an alternative water source be selected in early 2020. The schedule established for selecting an alternative water source is presented below:

- ◆ **Public Forum on December 5, 2019**
- ◆ **Environmental Commission Recommendation at December 10, 2019 Meeting**
- ◆ **Alternative Water Source Selection at January 7, 2020 City Council Meeting**

Once an alternative water source is selected, the City will need to continue their efforts to further develop the selected alternative water source in 2020 to ensure the new water source can be online by 2030.

Future work includes identification of regional partners, development of funding strategies, negotiations with potential water suppliers, selection of engineering design team, completion of design (including transmission main routing and water facilities siting), land acquisition, meetings with regulatory agencies, corrosion control study, permitting and five years of construction.

leave a COMMENT

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