

Public preferences and willingness to pay for water quality improvements in the Great Lakes Basin during Covid-19

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Economic valuation of water quality improvements is an essential input to inform policy and decision-making towards sustainable watershed management. The economic values provide important insight in the wide variety of benefits obtained from different water uses by water users and other stakeholders, which ideally exceed the necessary investments in water quality protection programs. These programs typically run over longer periods of times (decades). A key aspect in non-market valuation studies of water quality improvement programs is the temporal stability and reliability of the elicited values. This has been tested in the existing international literature, showing mixed results. However, much less is known about the temporal stability of nonmarket valuation results in the Great Lakes Basin in North America.

This research enhances our understanding of the public preferences and willingness to pay for improving the Great Lakes' water quality. Besides, it enriches the literature by providing new evidence for testing the robustness of environmental quality valuation over time. This study is based on a discrete choice experiment survey conducted at two time periods, less than one year apart, using two overlapping, but non-identical samples representing both Canadian and US residents in the Great Lakes region. The results of this study indicate that there are significant differences between public preferences and willingness to pay values for different Great Lakes. Tests furthermore show that public preferences for improving water quality are fairly robust and stable for the US side of the Great Lakes, but not for the Canadian side. It turns out that willingness to pay for water quality improvements in Canada increased over the study period. Considering that the first round of the survey was undertaken before the first wave of COVID-19 and the second round was between the first and the second wave, we discuss the possible influence of increasing public awareness of the essential water services provided by the Great Lakes and public concern about the uncertainties associated with their financial situation and employment status caused by the global COVID-19 pandemic.