

## **How much does it cost? The socio-economic impact of algal blooms on Lake Erie**

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The recurrence of hazardous cyanobacteria, often referred to as hazardous algal blooms, and the nuisance algae *Cladophora* on Lake Erie has raised concerns about the impacts across a number of areas and across a number of sectors. How do these impacts affect the welfare of Canadians living in the Lake Erie Basin? An economic assessment was used to assess the impact of these blooms on the welfare of the residents within 100 km of the Lake in the Canadian Province of Ontario. The analysis began with the damage that algal blooms can cause to the ecological goods and services provided by the Lake. All of the ecological goods and services that contribute to human well-being and not just those that are observable in the market were considered in this study. The reductions in ecological goods and services for each scenario were used to assess changes in the economic value to the Canadian sectors in the basin economy including recreation, fishing, tourism, property values as well as non-monetary values. The impacts of the blooms are presented for two 30-year scenarios from a baseline condition: a business-as-usual (no actions to reduce nutrient loadings into Lake Erie) and a policy intervention scenario (that assumed actions are taken to reduce nutrient loadings leading to reductions of blooms). This presentation will include some of the concepts of welfare economics, the decisions that were made during the study as well as the results of the analysis.