Updating Non-market Values of Restoring the Great Lakes 2023 to 2024 Survey of Opinion

-

Methodology Report

Environment and
Climate Change Canada

Environnement et
Changement climatique Canada

Canada

**Updating Non-market Values of Restoring the Great Lakes 2023 to 2024
Survey of Opinion – Methodology Report**

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Contents

Executive Summary

1. Background

Environment and Climate Change Canada (ECCC) undertook a number of economic analyses on the costs of algal blooms in Lake Erie and Lake Ontario to their respective regional economies and to the provincial economy. In 2021, ECCC completed an evaluation of the cost and benefits of implementing different BMPs to reduce agricultural sources of phosphorus that incorporated the cost of algal blooms. All of these analyses relied on what was then a 14-year-old meta-analysis for the willingness-to-pay, a value that was required for establishing a value for the non-market goods and services provided by the Lakes.

ECCC was looking to update the willing-to-pay by directly surveying Canadians to assess their opinions on a number of water quality issues about the Great Lakes. The update was to include lake specific (e.g., residents of Lake Erie and Lake Ontario basins) willingness-to-pay values.

2. Research Purpose and Objectives

The purpose of this research is to provide up-to-date information to support the valuation of non-market goods and services delivered by the Great Lakes.

The objectives of the research are to:

- Determine Canadians' knowledge of their drinking water sources.
- Determine # of Canadian visits to and uses of the Great Lakes.
- Determine Canadians' knowledge of Great Lakes water quality and threats.
- Determine up-to-date non-market values for future Great Lakes water quality scenarios.

3. Methodology

The research consisted of two quantitative surveys, which included a Resources for the Future (RFF) Water Quality Ladder (WQL) and a Canadian Council of Ministers of the Environment (CCME) Water Quality Ladder (WQL).

Data collection was conducted online through one master questionnaire where respondents for each survey were directed to their region of residence defined by FSA. Ipsos utilized a panel-based non-probability sampling approach to complete n=2,500 completed surveys with the Ontarians general population aged 18+. In addition to setting regional quotas, the researchers highly recommended setting age and gender quotas to ensure that the sample of respondents for both surveys was representative of the population according to the latest census data.

The survey platform was Accessibility for Ontarians with Disabilities Act (AODA) compliant according to Web Content Accessibility Guidelines (WCAG2.0AA). Survey panelists had means to communicate their specific accessibility needs to enable survey participation via email. Survey respondents were informed of their rights

under the Privacy Act, the Personal Information Protection and Electronic Documents Act, and the Access to Information Act, and that respondents' rights were protected throughout the research process.

For the survey, a pre-test was conducted on May 14th, 2024, with 77 completes, to confirm survey length before fully deploying the questionnaire. The survey was fully launched and ran between May 14th, 2024, and August 23rd, 2024.

4. Contract Value

The study overall entailed an expenditure of $44,838.40, including tax.

5. Political Neutrality Certification

I hereby certify as Senior Officer of Ipsos that the deliverables fully comply with the Government of Canada political neutrality requirements outlined in the Communications Policy of the Government of Canada and Procedures for Planning and Contracting Public Opinion Research. Specifically, the deliverables do not include information on electoral voting intentions, political party preferences, standings with the electorate or ratings of the performance of a political party or its leaders.

Brad Griffin
President
Ipsos Public Affairs

Methodology Summary

1. Research Methodology

1.1 Target Audience

The target audience was a random selection of residents in and outside Ontarians Great Lakes hydrological boundaries. ECCC provided postal codes for the Great Lakes basin to target populations inside the Great Lakes region.

1.2 Sample Frame

The sample frame for the surveys included respondents who resided in and outside Canadian Great Lakes hydrological boundaries. ECCC provided Ipsos with postal codes for the Great Lakes basin to target populations inside the Great Lakes region. Residents from other regions were also included in the sample for comparison purposes. As previously stated, the researchers strongly recommended incorporating age and gender quotas based on census data to ensure that the sample composition reflected the proportion of these demographic groups in the general population of adult Ontarians. This was discussed at the project kick-off meeting.

A split sample design was incorporated for Ontario residents (n=2,500) to achieve the following quotas for each of the specified regions:

Version 1: Survey instrument Resources for the Future (RFF) Water Quality Ladder (WQL) was used for: (3 Lakes)

a) Residents in the Great Lakes basin (n=325)
b) Residents in the outside the Great Lakes within Ontario (n=300)

Version 2: Survey instrument Canadian Council of Ministers of the Environment (CCME) Water Quality Ladder (WQL) was used for: (3 Lakes)

a) Residents in the Great Lakes basin (n=325)
b) Residents in the outside the Great Lakes within Ontario (n=300)

Version 3: Survey instrument Resources for the Future (RFF) Water Quality Ladder (WQL) was used for: (5 Lakes)

a) Residents in the Great Lakes basin (n=325)
b) Residents in the outside the Great Lakes within Ontario (n=300)

Version 4: Survey instrument Canadian Council of Ministers of the Environment (CCME) Water Quality Ladder (WQL) was used for: (5 Lakes)

a) Residents in the Great Lakes basin (n=325)
b) Residents in the outside the Great Lakes within Ontario (n=300)

The results from 1,250 surveyed with the RFF WQL section allowed for the establishment of "Willingness-to-pay" value used in economic analyses. The results from the 1,250 surveyed with the CCME WQL section accounted for the "non-use value" of the Great Lakes, for use in economic analyses.

Ipsos ensured that all industry standards, and all other GC standards for quantitative public opinion were observed. Specifically, Ipsos ensured compliance with the standards for the conduct of Government of Canada Public Opinion Research for Online Surveys.

1.3 Participant Recruitment

Sample Source

Ipsos partnered with Canadian Viewpoint Inc., on the fieldwork and in obtaining the required sample Canadian Viewpoint has one of the largest consumer panels at ~300,000 active panelists. Like Ipsos, Canadian Viewpoint uses mixed-mode strategies (phone/online/in-person) to build its panel permitting more representative samples. Canadian Viewpoint's online consumer panel is also recruited using post screeners during telephone surveys, Facebook, online vetted list and during in-person studies. Incentives are not used for recruitment purposes to ensure quality, but respondents are incentivized for completing survey directly proportionate to the amount of time taken to complete the survey and with comparable incentives offered by other online panel sources.

The comprehensive background profiling data gathered when respondents join a panel allows for the targeting of respondents based on key criteria, such as region, age, gender, education and income level, intention to buy a home within 12 months, profession, and other characteristics.

The data excludes any duplicate respondents based on IP capture and excludes panelists who have completed another Government of Canada survey in the previous 30 days as a member of that panel.

Sample Weighting

The table below shows the unweighted and weighted distributions of the online sample. Weighting was applied to the sample to ensure that the final data reflects the general adult population by region, age, and gender according to the 2021 Census. A Random Iterative Method (RIM) technique was applied for weighting. Note: totals may not add to 100% due to rounding.

Weighted and Unweighted Online Sample:

Residents in the Great Lakes basin

	Unweighted Sample Size	Weighted Sample Size
	1308	1308
Gender		
Female	663	667
Male	601	627
Diverse /Prefer not to answer	14	14
Age		
18-34	332	374
35-54	521	425
55+	455	509

Residents in the outside the Great Lakes within Ontario

	Unweighted Sample Size	Weighted Sample Size
	1210	**1210**
Gender		
Female	681	615
Male	510	575
Diverse /Prefer not to answer	19	21
Age		
18-34	306	330
35-54	406	393
55+	498	488

Email Statistics

For this survey, a non-probability sample was used. Therefore, a response rate cannot be calculated. However, the participation rate for the baseline survey was 64%. Participation rate is calculated as follows: **Participation Rate = R/(R+IS+U)**.

Completions	
Invalid Cases	372
Unresolved (U)	**0**
In-scope non-responding (IS)	**1697**
Responding units (R)	**3031**
Participation Rate	**64%**

Online survey cases can be broken down into four broad categories:

Invalid Cases
These can include only clearly invalid cases (for example, invitations mistakenly sent to people who did not qualify for the study, incomplete or missing email addresses in a client-supplied list).

Unresolved (U)
These include all the cases where it cannot be established whether the invitation was sent to an eligible or an ineligible respondent or unit (for example, when email invitations bounce back or remain without an answer before the candidate could be qualified).

In-scope non-responding (IS)
These include all refusals, either implicit or explicit; all non-contacts and early break-offs of known eligible cases; and other eligible non-respondents (due to illness, leave of absence, vacation or other).

Responding units (R)
These include cases who have participated but who were disqualified afterwards (for example, when admissible quotas have been reached). It also includes all completed surveys or partially completed surveys that meet the criteria set by the researcher to be included in the analysis of the data.

Unresolved (U), in-scope (IS), and responding units (R) are all included in the broad category of "potentially eligible" cases. However, invalid cases are not included in the calculation of outcome rates.

For this survey a router was used to screen potential respondents and assign them to one of several surveys. Given this, it is not possible to estimate the number of cases "invited" to participate and whether they were eligible or not. Therefore, it is not possible to estimate the "unresolved" cases. For this survey, responding units is broken out as follows.

Completions	
- Over quota	513
- Qualified Completes	2518
Responding units (R)	**3031**

The sample routing technology uses weighted randomization to assign surveys to participants. Upon entry into the system, panelists are checked to ensure they have not exceeded survey participation limits. A list of potential survey matches is determined for each panelist based upon the information we know about them. Panelists may be asked additional screening questions within the system to ensure they meet the project criteria. Priority may be given to surveys that are behind schedule; however, this is kept to a minimum as survey randomization must remain in place as a key element for preventing bias.   In this case, limited prioritization was applied during the field window, therefore there is a low chance of sample bias.

Non-Response Analysis

The results of this survey are not statistically projectable to the target population because the sampling method used does not ensure that the sample represents the target population with a known margin of sampling error. Reported percentages are not generalizable to any group other than the sample studied, and therefore no formal statistical inferences can be drawn between the sample results and the broader target population it may be intended to reflect. The data have been weighted to reflect the demographic composition of Canadian adults aged 25 years and over.

The table below compares the unweighted survey samples to the 2021 Census results by region, age, and gender. Overall, the sample is highly representative of the national adult population.

Residents in the Great Lakes basin

	Unweighted Percentage	Census 2021 Proportions
Residents in the Great Lakes basin	1308	1308
Gender		
Female	53%	52%
Male	46%	48%
Diverse /Prefer not to answer	1%	<1%
Age		
18-34	25%	29%
35-54	40%	33%
55+	35%	39%

Residents in the outside the Great Lakes within Ontario

	Unweighted Percentage	Census 2021 Proportions
	1210	1210
Gender		
Female	56%	52%
Male	42%	49%
Diverse /Prefer not to answer	2%	<1%
Age		
18-34	25%	27%
35-54	34%	32%
55+	41%	40%

Appendix – Survey Questionnaire

1.1 English Questionnaire

Introduction

Si vous préférez participer en français, veuillez cliquer sur français.

You are invited to participate in a study conducted by Ipsos, on behalf of the Government of Canada. We are contacting you because we are interested in your views of and experiences with the Great Lakes in Canada.

If you decide to volunteer, you will be asked to complete a 15-minute survey. Your identity will be confidential. You may decline to answer any question(s) you prefer not to answer by leaving them blank. Further, you may end your participation in the survey at any time by exiting your browser. Because the survey does not ask for your name, once you submit your responses it will not be possible to withdraw your consent to participate, as we have no way of knowing which responses are yours.

Collected data will be stored securely on a password-protected computer in a locked office. Survey questions focus on your views of water quality in the Great Lakes, your visits and possible recreational activities, and basic background information about yourself like your age and gender to understand how representative the sample is who completes the survey.

Your participation in this study will contribute towards a better understanding of public perceptions of the value of the Great Lakes. The information you provide will be used to inform decision-makers in supporting their water quality protection policies related to the Great Lakes.

This survey is part of a larger study conducted in collaboration with the University of Waterloo, who will conduct the data analysis at a later stage. This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Board (REB #44912). If you have questions for the Committee, contact the Office of Research Ethics at researchethics@uwaterloo.ca. Your answers will remain anonymous and the information you provide will be administered according to the requirements of the *Privacy Act*, the *Access to Information Act*, and any other pertinent legislation.

Thank you for your interest in this project.

Should you need to access the survey in a different mode, please contact Ipsos at [EMAIL].To verify the legitimacy of this study please contact [CONTACT]. Click to view Ipsos **privacy** policy**.**

Q1 By indicating your consent, you are not waiving your legal rights or releasing the investigator or institution involved from their legal and professional responsibilities.

I agree to participate in a 15-minute survey conducted for a research project led Ipsos on behalf of the Government of Canada. I have made this decision based on the information I have received in the information letter and have had the opportunity to receive any additional details I wanted about the study. All information I provide will remain confidential. I am aware that I may withdraw from the study at any time by quitting the survey. [Required]

○ I agree

○ I decline

Section 1: General background questions

Q39 Please enter your specific postal code: [optional – if no postal code entered, ask all questions, just skip section 3. If postal code entered and not in excel file, terminate]

Q36a. Are you 18 years of age or older?

      Yes
      No
[If no then Thank and Terminate]

Q36 What is your birth year and month?

	Year
Please Select:	Choose an item.

[If less the 18 thanks and terminate]

Q37 With which gender do you identify most?

○ Woman

○ Man

○ Transgender

○ Non-binary

○ Gender variant

○ Not listed _____

○ Prefer not to answer

Q2 How long have you lived in the municipality where you currently live? If you have lived in your municipality less than 1 year please put 0.   _____ years

Q3 Before moving to your current municipality, where were you living before?

○ I have always lived in the municipality where I currently live

○ Another municipality in Ontario

○ Another municipality in another province in Canada

○ In another country

Q4 Where do you get your drinking water from? (Multiple answers possible)

☐ My community's municipal water supplier

☐ Private groundwater well

☐ Bottled water

☐ Other, namely _____

Q5 On average, how much do you pay for your monthly water bill? (If you do not know the exact amount, please state your best guess)

○ My best guess is $ _____ per month

○ I know the exact amount, namely $ _____ per month

○ I don't pay for this directly, this is included in my monthly rent

○ I don't know

Q6 Does this bill include your sewer bill?

○ No

○ Yes

○ I don't know

Q7 How much bottled water do you and your family drink on average?

○ Only 1-2 litres per week

○ More than 1-2 litres per week, namely on average _____ litres per week

Q8 How safe do you believe it is to drink water from the following source(s)?

	Please select from the dropdown list
Municipal water supplier *(Display This row if "My community's municipal water supplier" is selected in Q4.)*	Choose an item.
Private groundwater well *(Display This row if "Private groundwater well" is selected in Q4.)*	Choose an item.
Bottled water *(Display This row if "Bottled water" is selected in Q4.)*	Choose an item.
(Display the other source specified if "Other, namely _" is selected in Q4.)	Choose an item.

Q9 Are you connected to the municipal sewer?

○ No

○ Yes

○ I don't know

Q10 How much do you pay for your monthly wastewater bill? (If you do not know the exact amount, please state your best guess)

○ I know the exact amount, namely $ _____ per month ~~year~~

○ My best guess is $ _____ per month ~~year~~

○ I don't know because my water bill does not separate wastewater from drinking waterI don't pay for this utility directly, this is included in my monthly rentI don't know

Q11 Where does the wastewater generated by your household go?

○ Private septic tank

○ Elsewhere, namely _____

○ I don't know

Section 2: Visits and recreation in the Great Lakes

Q12 Which of the Great Lakes is closest to your home? (Select only one lake. If you live exactly between 2 lakes select both)

☐ Lake Superior

☐ Lake Huron

☐ Lake Michigan

☐ Lake Erie

☐ Lake Ontario

☐ I don't know

Q13 How far do you live from *(Display the name(s) of the lake(s) selected in Q12.)*? (If you do not know the exact distance, please state your best guess)

Each one of the following choices is displayed only if it is selected in Q12.

○ Lake Superior _____ kilometres

○ Lake Huron _____ kilometres

○ Lake Michigan _____ kilometres

○ Lake Erie _____ kilometres

○ Lake Ontario _____ kilometres

Q13B. Do you or your family own a cottage on the Great Lakes?

      No

      Yes, on Lake [dropdown list: Superior, Huron, Michigan, Erie, Ontario]

Q14, Can you indicate (a) how often you have visited each of the Great Lakes over the past 3 years (2021-now), how often you foresee to visit them in the near future (next 3 years 2024-2026), and which activities you typically undertake at the lake(s) you visited?

	Lake Superior	Lake Huron	Lake Michigan	Lake Erie	Lake Ontario
a) The number of times you have visited in past 3 years	_____	_____		_____	_____
b) The number of times you plan to visit in the next 3 years	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
c) Activities you typically undertake (Multiple answers possible): Swimming	☐	☐	☐	☐	☐
Fishing	☐	☐	☐	☐	☐
Ice-fishing	☐	☐	☐	☐	☐
Canoeing and kayaking	☐	☐	☐	☐	☐
Boating	☐	☐	☐	☐	☐
Surfing	☐	☐	☐	☐	☐
Mussel catching	☐	☐	☐	☐	☐
Walking	☐	☐	☐	☐	☐
Biking	☐	☐	☐	☐	☐
Birdwatching	☐	☐	☐	☐	☐
Picnicking	☐	☐	☐	☐	☐
Other, please specify	_____	_____	_____	_____	_____

Q15 What were the travel time and travel costs on average per visit to the lake(s) that you visited over the past 3 years (2021-now)?

(Display only the lake(s) for which the answer to the first row of Q14 is greater than 0.)	Lake Superior	Lake Huron	Lake Michigan	Lake Erie	Lake Ontario
Average number of days per visit	. _____	. _____	_____	. _____	. _____
Number of family members typically with you on your visits	_____	_____	_____	_____	_____
Average travel time from home	__ : __ .hrs : mins	__ : __ .hrs : mins	__ : __ hrs : mins	__ : __ .hrs : mins	__ : __ .hrs : mins
Average travel costs per visit (gas costs in $)	_____	_____	_____	_____	_____
Average costs on-site per visit such as parking, accommodation, food, hiring boat, fishing gear, fishing license and so on in $)	_____	_____	_____	_____	_____
Any other costs you incur for your visit in $	_____	_____	_____	_____	_____
Please specify those other costs	_____	_____	_____	_____	_____

Q16 Please select one option for each Lake from the dropdown list in each column.

[In the version where we use the CCME water quality ladder, instead of boatable, fishable, swimmable, drinkable in the middle reply section (In your opinion, how would you classify water quality in each of the Great Lakes?), we need to have the water quality levels poor, moderate, good, excellent.]

	How much do you know about the current water quality in the Great Lakes?	In your opinion, how would you classify water quality in each of the Great Lakes?	How has water quality in the Great Lakes changed over the past 5-10 years in your opinion?
Lake Superior	Choose an item.	Choose an item.	Choose an item.
Lake Huron	Choose an item.	Choose an item.	Choose an item.
Lake Michigan			
Lake Erie	Choose an item.	Choose an item.	Choose an item.
Lake Ontario	Choose an item.	Choose an item.	Choose an item.

Q17 In your opinion, what are the top 3 challenges in the Great Lakes?

(please rank the top 3 challenges as 1, 2, 3 per lake where 1 is the most important challenge)	Lake Superior	Lake Huron	Lake Michigan	Lake Erie	Lake Ontario
Population growth	○	○	○	○	○

Overcrowding at recreation sites	○	○	○	○	○
Sewage water overflow	○	○	○	○	○
Plastic pollution on beaches and in water	○	○	○	○	○
Harmful algal blooms	○	○	○	○	○
Climate change and changing water levels	○	○	○	○	○
Shoreline erosion	○	○	○	○	○
Loss of native fish species	○	○	○	○	○
Loss of wildlife habitat	○	○	○	○	○
Invasive species	○	○	○	○	○
Wetlands loss	○	○	○	○	○
Toxic chemicals	○	○	○	○	○
Bathing advisories	○	○	○	○	○
Fish consumption advisories	○	○	○	○	○
Other threats, please specify[Text box]	_____	_____	_____	_____	_____

I don't know   ○   ○   ○   ○   ○

[If 'other threats' was selected in Q17, proceed to Q17b, otherwise skip to Q18]

Q17b. Could you please specify which other challenges ~~related to water quality in the Great Lakes~~ that you identified? Please be as specific as possible [open-ended]

Q18 How important is water quality in the Great Lakes for you compared to other issues, such as schools and education, public health care, employment, policing and public safety?

○ Much more important

○ More important

○ Equally important

○ Less important

○ Much less important

Section 3: Version 1_Great Lakes Futures

In this section, we will present you with a number of cards with maps showing possible futures for 3 of the Great Lakes. These futures are based on changes in water quality in these lakes.

Water quality, from poorest to best, is represented by the following possible uses:

• **Boatable**

• **Fishable**

• **Swimmable**

• **Drinkable**

• Each card shows a map with a **reference** water quality situation in the 3 lakes and a possible **target** water quality situation for each of the 3 lakes.

• The **reference** situation depicts the situation if no extra pollution abatement action is undertaken.

• The **target** situation can only be achieved if extra pollution abatement measures are implemented in industry, agriculture and urban areas around the 3 Great Lakes.

• These measures improve water quality in the **target** situation compared to the **reference** situation in Lake Michigan, Erie and Ontario from *boatable* to *fishable*, *swimmable* or *drinkable*.

• The extra pollution abatement actions cost money. These costs will be borne by all sectors in society, including industry, agriculture and households like yours.

• We are interested in hearing from you which water quality you prefer for which Great Lake and how much you are willing to contribute financially to achieve this.

• Every household will be asked to contribute financially by paying a higher water and wastewater bill - called "water bill" hereafter - than you currently pay to achieve your preferred water quality in your preferred lake.

• Your choices will help inform decision-making to identify which lakes should receive priority in restoring water quality.

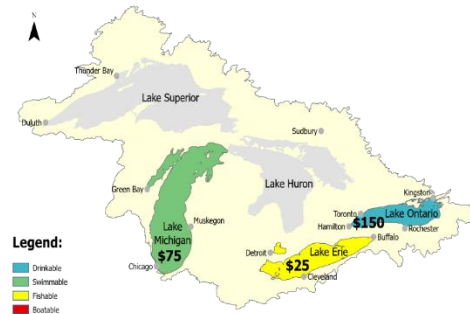• You will be shown an example card with explanation first.

Example card

for a detailed explanation click here

Q22 Please select which of the situations presented in the maps you prefer most.

I prefer:
(click one option only, namely your most preferred situation)

○ The reference situation. I will not pay anything extra.

○ The target situation for Lake Michigan for which I'm willing to pay the given increase in my annual water bill of $75.

○ The target situation for Lake Erie for which I'm willing to pay the given increase in my annual water bill of $25.

○ The target situation for Lake Ontario for which I'm willing to pay the given increase in my annual water bill of $150.

Explanation:

The map on the left-hand-side shows the **reference situation** if no extra pollution abatement measures are taken, and water quality is suitable for *boating* in:

- Lake Michigan
- Lake Erie
- Lake Ontario.

The map on the right-hand side shows the **target situation** where the extra pollution abatement actions improve water quality:

- from *boatable* to *swimmable* in Lake Michigan, increasing your annual water bill by $75 ($6.25/month)
- from *boatable* to *fishable* in Lake Erie, resulting in an increase of your annual household water bill by $25 ($2.10/month)
- from *boatable* to *drinkable* in Lake Ontario, increasing your annual water bill by $150 ($12.50/month).

If you prefer the reference situation for the 3 Great Lakes where water quality remains the same, your household's water bill will remain the same and you do not pay anything extra ($0).
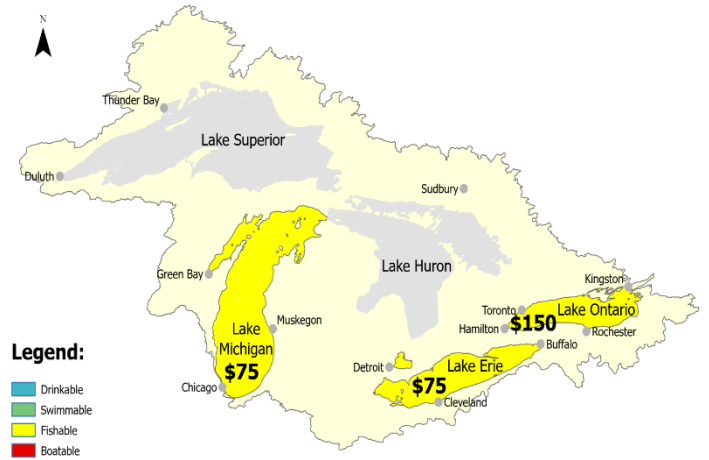
- You will now see 6 more of these cards. Please select each time which of the situations you prefer most.

- Please answer as truthfully as possible and think about your true willingness to pay the increase in your yearly water bill, keeping in mind your other expenses and priorities.

- The results from this survey will be used to inform policy and decision-making to identify which lakes should receive priority in restoring water quality.

Card 1

Reference situation

Target situation

Q23 Please select which of the situations presented in the maps you prefer most.

I prefer:
(click one option only, namely your most preferred situation)

○ The reference situation. I will not pay anything extra.

○ The target situation for Lake Michigan for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Erie for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Ontario for which I'm willing to pay the given increase in my annual water bill.

Card 2

Reference situation

Target situation

Q24 Please select which of the situations presented in the maps you prefer most.

I prefer:
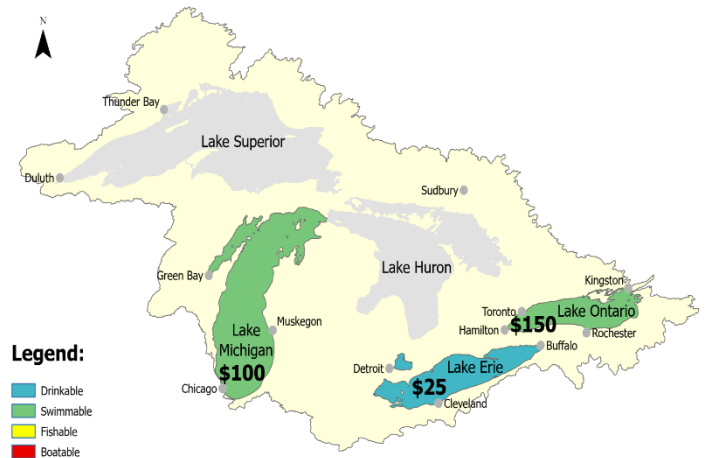(click one option only, namely your most preferred situation)

○ The reference situation. I will not pay anything extra.

○ The target situation for Lake Michigan for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Erie for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Ontario for which I'm willing to pay the given increase in my annual water bill.

Card 3

Reference situation

Target situation

Q25 Please select which of the situations presented in the maps you prefer most.

I prefer:
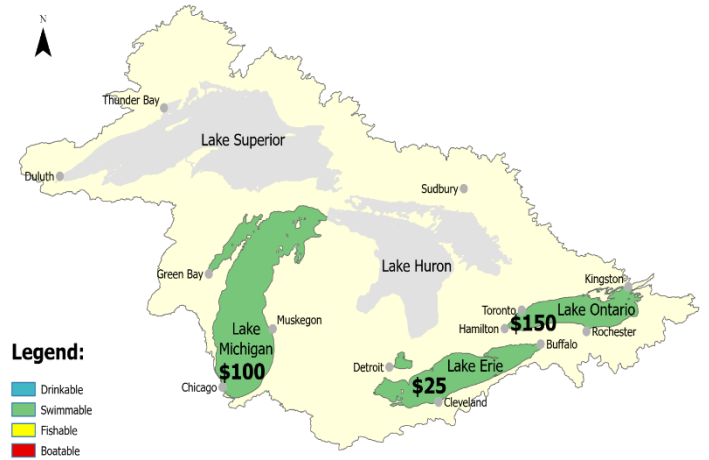(click one option only, namely your most preferred situation)

○ The reference situation. I will not pay anything extra.

○ The target situation for Lake Michigan for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Erie for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Ontario for which I'm willing to pay the given increase in my annual water bill.

Card 4

Reference situation

Target situation

Q26 Please select which of the situations presented in the maps you prefer most.

I prefer:
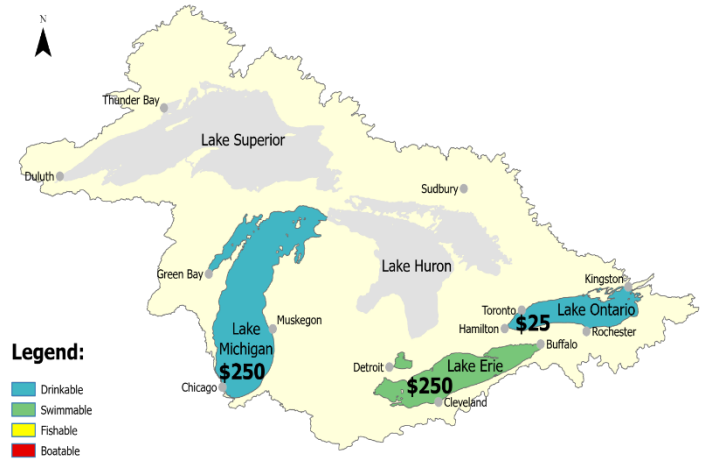(click one option only, namely your most preferred situation)

○ The reference situation. I will not pay anything extra.

○ The target situation for Lake Michigan for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Erie for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Ontario for which I'm willing to pay the given increase in my annual water bill.

Card 5

Reference situation

Target situation

Q27 Please select which of the situations presented in the maps you prefer most.

I prefer:
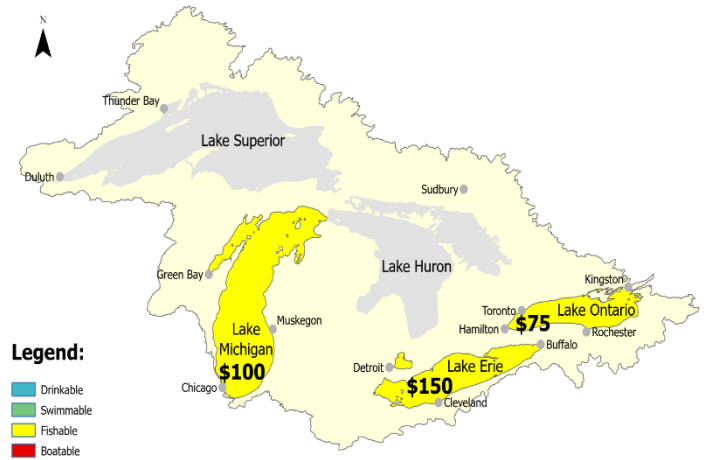(click one option only, namely your most preferred situation)

○ The reference situation. I will not pay anything extra.

○ The target situation for Lake Michigan for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Erie for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Ontario for which I'm willing to pay the given increase in my annual water bill.

Card 6

Q28 Please select which of the situations presented in the maps you prefer most.

I prefer:
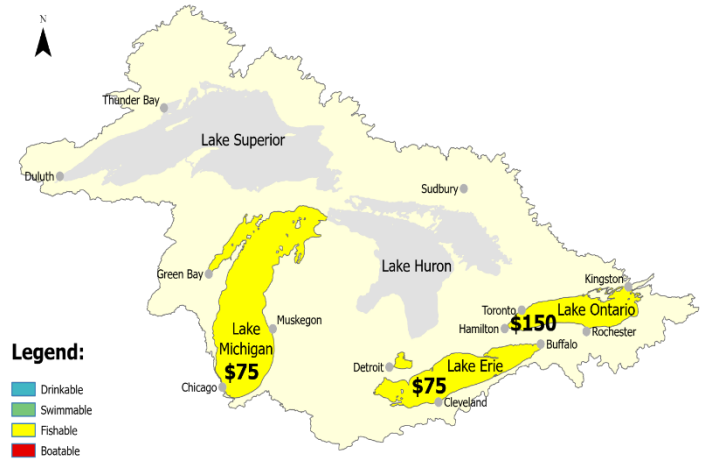(click one option only, namely your most preferred situation)

○ The reference situation. I will not pay anything extra.

○ The target situation for Lake Michigan for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Erie for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Ontario for which I'm willing to pay the given increase in my annual water bill.

Q29 In the last card you said you would be willing to pay an increase in your annual water bill to improve *(Display the option selected in Q28)*. How much are you willing to pay <u>maximum</u> to achieve this specific situation in the last card? (Click here to show the last card in a new window.)

○ I'm willing to pay maximum $ _____ annually

○ On second thought, I'm not willing to pay anything

Q30 You chose the reference situation in all of the cards, can you explain why?

○ I don't care about water quality improvements in the Great Lakes.

○ I don't have enough income to be able to pay for the proposed water quality improvements.

○ I prefer to spend my money on other things than water quality improvements in the Great Lakes.

○ I don't believe the proposed water quality improvements are feasible or achievable.

○ I don't believe that my money will be spent on water quality improvements in the Great Lakes.

○ The polluter is responsible and should pay for the water quality improvements, not me.

○ The government is responsible and should pay for the water quality improvements, not me.

○ Other reason, please specify _____

Q31 Please rank how important each of the following characteristics was each time you chose your most preferred situation.

	Please select one option for each characteristic from the dropdown list
The specific lake where the improvement was proposed	Choose an item.
The specific water quality improvement	Choose an item.
The increase in my annual water and wastewater bill	Choose an item.
Other, namely _____	Choose an item.

Q32-1 Would you be willing to pay an increase in your water and wastewater bill for the sake of the environment and wildlife in the Great Lakes only, without using any of the lakes for recreational or drinking water purposes now and in the future?

○ No

○ Yes

○ I don't know

Q32-2 How much are you willing to pay <u>maximum</u> on behalf of your household for the sake of the environment and wildlife in the Great Lakes only, without using any of the lakes for recreational or drinking water purposes now and in the future for each of the following lakes?

○ Lake Michigan $ _____ per year

○ Lake Erie $ _____ per year

○ Lake Ontario $ _____ per year

Section 3: Version 2 Great Lakes Futures

In this section, we will present you with a number of cards with maps showing possible futures for 3 of the Great Lakes. These futures are based on changes in water quality in these lakes.

Water quality, from poorest to best, is represented by the following categories:

- **Poor**:
  Water quality measurements usually exceed water quality guidelines and by a wide margin. Aquatic life (plants and animals) is threatened, impaired or even lost.
- **Moderate**:
  Water quality measurements often exceed water quality guidelines and by a considerable margin. Aquatic life (plants and animals) may be threatened or impaired.
- **Good**:
  Water quality measurements rarely exceed water quality guidelines and usually by a narrow margin.
  Aquatic life (plants and animals) is protected with only a minor degree of threat or impairment.
- **Excellent**:
  Water quality measurements never or very rarely exceed water quality guidelines.
  Aquatic life (plants and animals) is not threatened or impaired.

- Each card shows a map with a **reference** water quality situation in the 3 lakes and a possible **target** water quality situation for each of the 3 lakes.

- The **reference** situation depicts the situation if no extra pollution abatement action is undertaken.

- The **target** situation can only be achieved if extra pollution abatement measures are implemented in industry, agriculture and urban areas around the 3 Great Lakes.

- These measures improve water quality in the **target** situation compared to the **reference** situation in Lake Michigan, Erie and Ontario from *poor* to *moderate*, *good* or *excellent*.

- The extra pollution abatement actions cost money. These costs will be borne by all sectors in society, including industry, agriculture and households like yours.

- We are interested in hearing from you which water quality you prefer for which Great Lake and how much you are willing to contribute financially to achieve this.

- Every household will be asked to contribute financially by paying a higher water and wastewater bill - called water bill hereafter - than you currently pay to achieve your preferred water quality in your preferred lake.

- Your choices will help inform decision-making to identify which lakes should receive priority in restoring water quality.

- You will be shown an example card with explanation first.
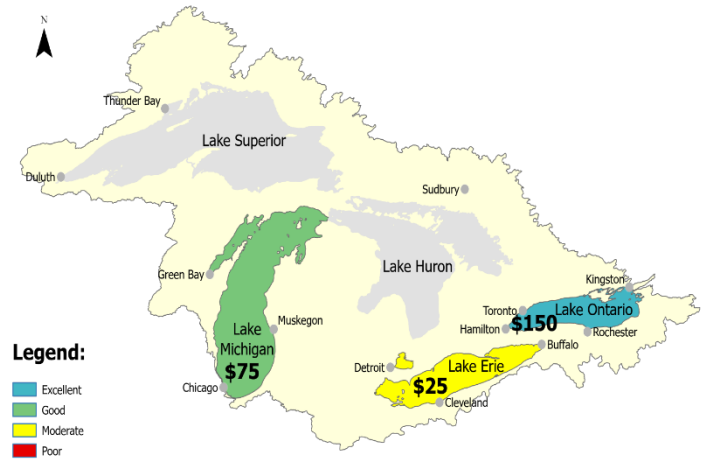

Page Break ─────────────────

Example card

for a detailed explanation click here

Reference situation

Target situation

Q22 Please select which of the situations presented in the maps you prefer most.

I prefer:
(click one option only, namely your most preferred situation)

○ The reference situation. I will not pay anything extra.

○ The target situation for Lake Michigan for which I'm willing to pay the given increase in my annual water bill of $75.

○ The target situation for Lake Erie for which I'm willing to pay the given increase in my annual water bill of $25.

○ The target situation for Lake Ontario for which I'm willing to pay the given increase in my annual water bill of $150.

Explanation:

The map on the left-hand-side shows the **reference situation** if no extra pollution abatement measures are taken, and water quality is *poor* in:

- Lake Michigan
- Lake Erie
- Lake Ontario.

The map on the right-hand side shows the **target situation** where the extra pollution abatement actions improve water quality:

- from *poor* to *good* in Lake Michigan, increasing your annual water bill by $75 ($6.25/month)
- from *poor* to *moderate* in Lake Erie, resulting in an increase of your annual household water bill by $25 ($2.10/month)
- from *poor* to *excellent* in Lake Ontario, increasing your annual water bill by $150 ($12.50/month).

If you prefer the reference situation for the 3 Great Lakes where water quality remains the same, your household's water bill will remain the same and you do not pay anything extra ($0).
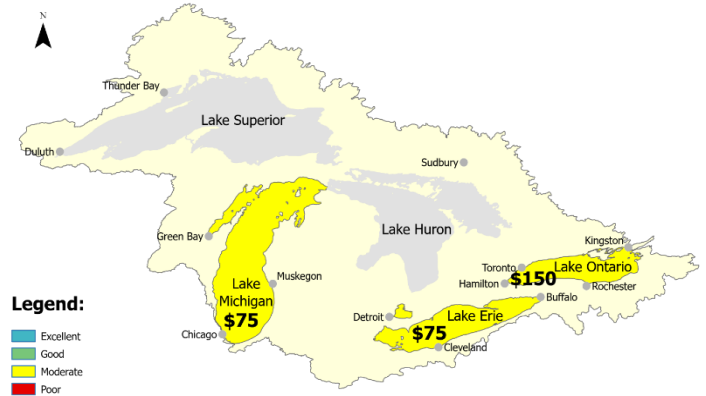

- You will now see 6 more of these cards. Please select each time which of the situations you prefer most.

- Please answer as truthfully as possible and think about your true willingness to pay the increase in your yearly water bill, keeping in mind your other expenses and priorities.

- The results from this survey will be used to inform policy and decision-making to identify which lakes should receive priority in restoring water quality.

Card 1

Reference situation

Target situation

Q23 Please select which of the situations presented in the maps you prefer most.I prefer:
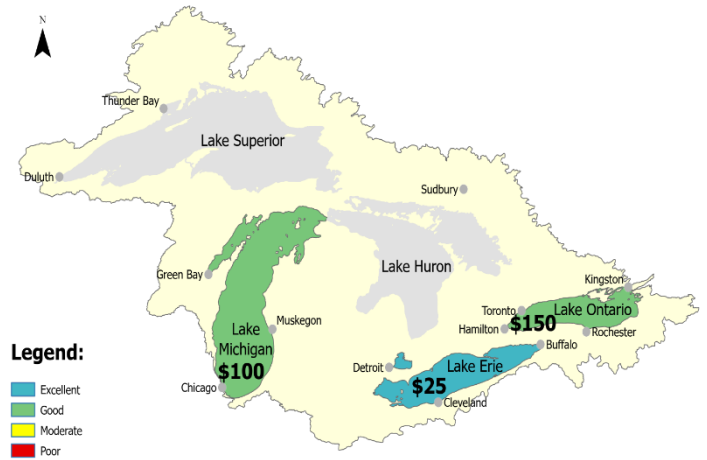(click one option only, namely your most preferred situation)

◯ The reference situation. I will not pay anything extra.

◯ The target situation for Lake Michigan for which I'm willing to pay the given increase in my annual water bill.

◯ The target situation for Lake Erie for which I'm willing to pay the given increase in my annual water bill.

◯ The target situation for Lake Ontario for which I'm willing to pay the given increase in my annual water bill.

Card 2

Reference situation

Target situation

Q24 Please select which of the situations presented in the maps you prefer most. I prefer:
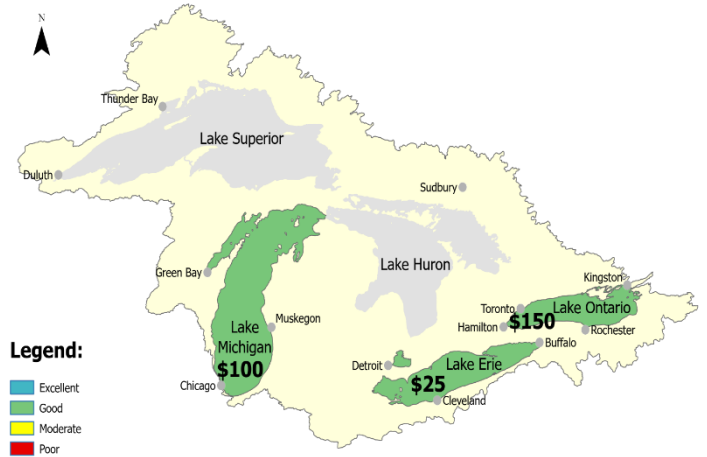(click one option only, namely your most preferred situation)

○ The reference situation. I will not pay anything extra.

○ The target situation for Lake Michigan for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Erie for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Ontario for which I'm willing to pay the given increase in my annual water bill.

Card 3

Reference situation

Target situation

Q25 Please select which of the situations presented in the maps you prefer most.I prefer:
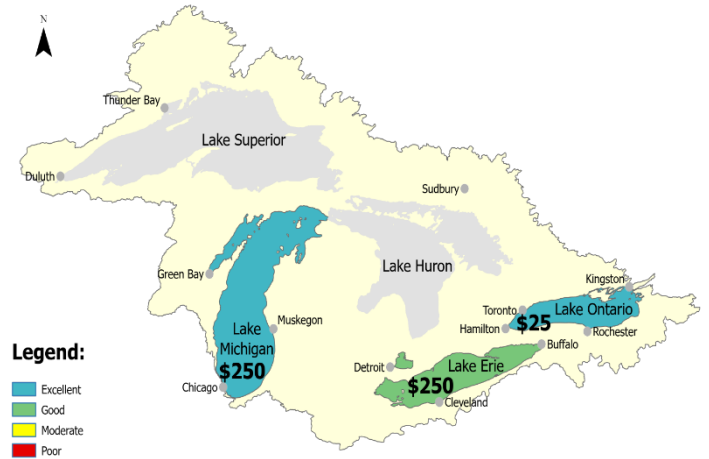(click one option only, namely your most preferred situation)

◯ The reference situation. I will not pay anything extra.

◯ The target situation for Lake Michigan for which I'm willing to pay the given increase in my annual water bill.

◯ The target situation for Lake Erie for which I'm willing to pay the given increase in my annual water bill.

◯ The target situation for Lake Ontario for which I'm willing to pay the given increase in my annual water bill.

Card 4

Reference situation

Target situation

Q26 Please select which of the situations presented in the maps you prefer most. I prefer:
(click one option only, namely your most preferred situation)

○ The reference situation. I will not pay anything extra.

○ The target situation for Lake Michigan for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Erie for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Ontario for which I'm willing to pay the given increase in my annual water bill.

Card 5

Reference situation

Target situation

Q27 Please select which of the situations presented in the maps you prefer most. I prefer:
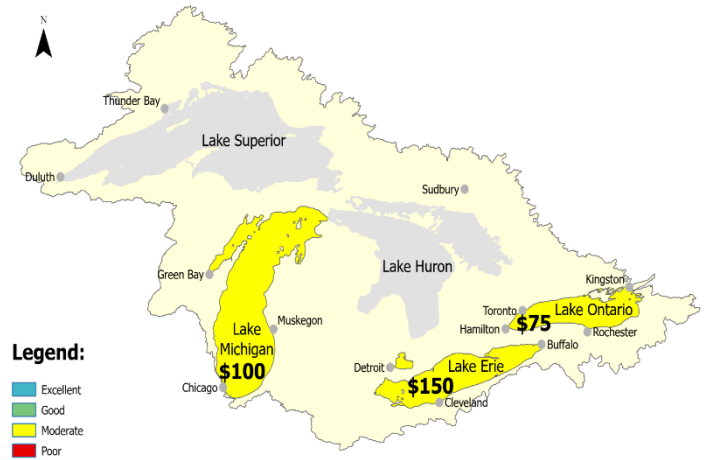(click one option only, namely your most preferred situation)

○ The reference situation. I will not pay anything extra.

○ The target situation for Lake Michigan for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Erie for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Ontario for which I'm willing to pay the given increase in my annual water bill.

Card 6

Reference situation

Target situation

Q28 Please select which of the situations presented in the maps you prefer most. I prefer:
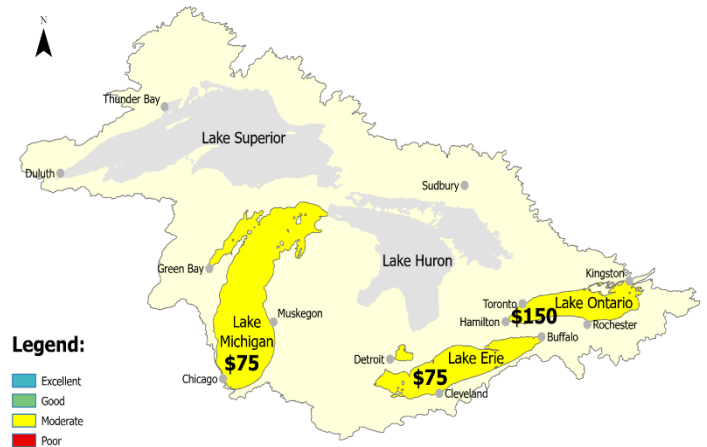(click one option only, namely your most preferred situation)

○ The reference situation. I will not pay anything extra.

○ The target situation for Lake Michigan for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Erie for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Ontario for which I'm willing to pay the given increase in my annual water bill.

Q29 In the last card you said you would be willing to pay an increase in your annual water bill to improve *(Display the option selected in Q28)*. How much are you willing to pay <u>maximum</u> to achieve this specific situation in the last card? (Click here to show the last card in a new window.)

○ I'm willing to pay maximum $ _____ annually

○ On second thought, I'm not willing to pay anything

Q30 You chose the reference situation in all of the cards, can you explain why?

○ I don't care about water quality improvements in the Great Lakes.

○ I don't have enough income to be able to pay for the proposed water quality improvements.

○ I prefer to spend my money on other things than water quality improvements in the Great Lakes.

○ I don't believe the proposed water quality improvements are feasible or achievable.

○ I don't believe that my money will be spent on water quality improvements in the Great Lakes.

○ The polluter is responsible and should pay for the water quality improvements, not me.

○ The government is responsible and should pay for the water quality improvements, not me.

○ Other reason, please specify _____

Q31 Please rank how important each of the following characteristics was each time you chose your most preferred situation.

	Please select one option for each characteristic from the dropdown list
The specific lake where the improvement was proposed	Choose an item.
The specific water quality improvement	Choose an item.
The increase in my annual water and wastewater bill	Choose an item.
Other, namely _____	Choose an item.

Q32-1 Would you be willing to pay an increase in your water and wastewater bill to improve or protect water quality in the Great Lakes only for recreational (boating, fishing, swimming) or drinking water purposes now and in the future?

○ No

○ Yes

○ I don't know

Page Break

Q32-2 How much are you willing to pay <u>maximum</u> on behalf of your household for recreational or drinking water purposes only now and in the future for each of the following lakes?

○ Lake Michigan $ _____ per year

○ Lake Erie $ _____ per year

○ Lake Ontario $ _____ per year

Section 3: Version 3_ Great Lakes Futures

In this section, we will present you with a number of cards with maps showing possible futures for the Great Lakes. These futures are based on changes in water quality in the lakes.

Water quality, from poorest to best, is represented by the following possible uses:

- **Boatable**
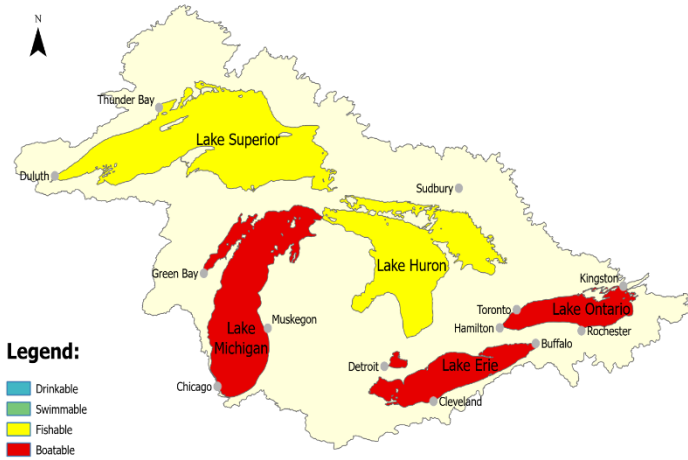- **Fishable**
- **Swimmable**
- **Drinkable**

- Each card shows a map with a **reference** water quality situation in the Great Lakes and a possible **target** water quality situation.

- The **reference** situation depicts the situation if no extra pollution abatement action is undertaken.

- The **target** situation can only be achieved if extra pollution abatement measures are implemented in industry, agriculture and urban areas around the Great Lakes.

- These measures improve water quality in the **target** situation compared to the **reference** situation in Lake Michigan, Erie and Ontario from *boatable* to *fishable*, *swimmable* or *drinkable*.

- The measures prevent water quality deterioration in Lake Superior and Huron, where water quality remains *drinkable* and does not deteriorate to *swimmable*, *fishable* or *boatable*.

- The extra pollution abatement actions cost money. These costs will be borne by all sectors in society, including industry, agriculture and households like yours.

- We are interested in hearing from you which water quality you prefer for which Great Lake and how much you are willing to contribute financially to achieve this.

- Every household will be asked to contribute financially by paying a higher water and wastewater bill - called water bill hereafter - than you currently pay to achieve your preferred water quality in your preferred lake.

- Your choices will help inform decision-making to identify which lakes should receive priority in restoring water quality or preventing water quality deterioration.

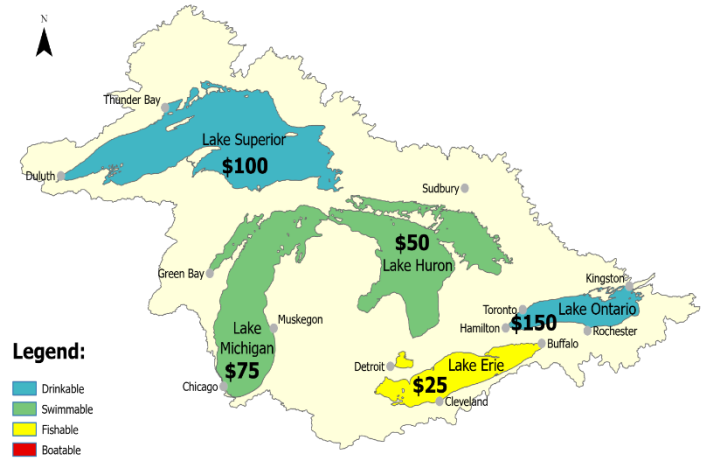- You will be shown an example card with explanation first.

Page Break

Example card

for a detailed explanation click here

Reference situation

Target situation

Q22 Please select which of the situations presented in the maps you prefer most. I prefer:
(click one option only, namely your most preferred situation)

○ The reference situation. I will not pay anything extra.

○ The target situation for Lake Superior for which I'm willing to pay the given increase in my annual water bill of $100.

○ The target situation for Lake Huron for which I'm willing to pay the given increase in my annual water bill of $50.

○ The target situation for Lake Michigan for which I'm willing to pay the given increase in my annual water bill of $75.

○ The target situation for Lake Erie for which I'm willing to pay the given increase in my annual water bill of $25.

○ The target situation for Lake Ontario for which I'm willing to pay the given increase in my annual water bill of $150.

Explanation:

The map on the left-hand-side shows the **reference situation** if no extra pollution abatement measures are taken, and water quality is suitable for *boating* in:

- Lake Michigan
- Lake Erie
- Lake Ontario

and suitable for *fishing* in:

- Lake Superior
- Lake Huron.

The map on the right-hand side shows the **target situation** where extra pollution abatement actions:

- Improve water quality:

- from *boatable* to *swimmable* in Lake Michigan, increasing your annual water bill by $75 ($6.25/month)
- from *boatable* to *fishable* in Lake Erie, resulting in an increase of your annual household water bill by $25 ($2.10/month)
- from *boatable* to *drinkable* in Lake Ontario, increasing your annual water bill by $150 ($12.50/month).
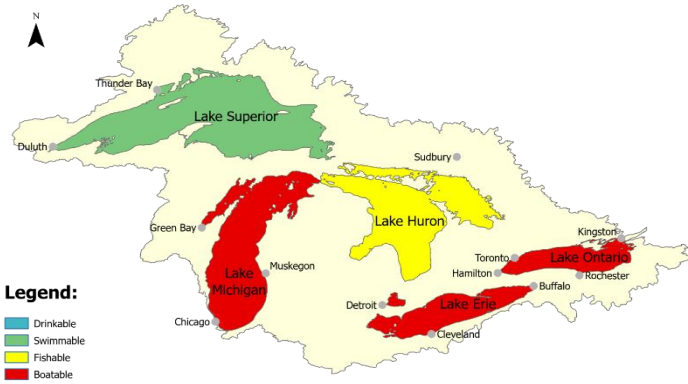
- Prevent the deterioration of water quality:

- from *drinkable* to *fishable* in Lake Superior, resulting in an increase of your annual household water bill by $100 ($8.35/month)
- from *swimmable* to *fishable* in Lake Huron, increasing your annual water bill by $50 ($4.15/month).

If you prefer the reference situation for the Great Lakes where water quality remains the same for Lake Michigan, Erie and Ontario and water quality deteriorates for Lake Superior and Huron, your household's water bill will remain the same and you do not pay anything extra ($0).
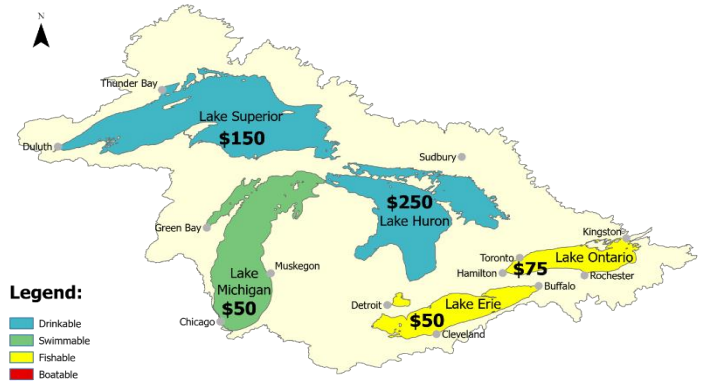
- You will now see 6 more of these cards. Please select each time which of the situations you prefer most.

- Please answer as truthfully as possible and think about your true willingness to pay the increase in your yearly water bill, keeping in mind your other expenses and priorities.

- The results from this survey will be used to inform policy and decision-making to identify which lakes should receive priority in restoring water quality or preventing water quality deterioration.

Card 1

Reference situation

Target situation

Q23 Please select which of the situations presented in the maps you prefer most. I prefer:
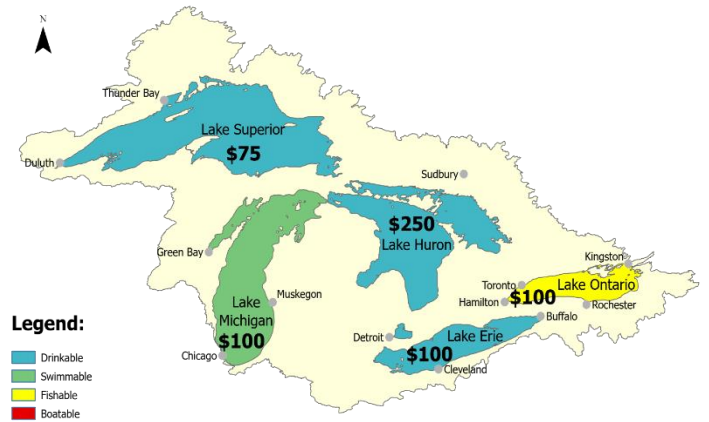(click one option only, namely your most preferred situation)

○ The reference situation. I will not pay anything extra.

○ The target situation for Lake Superior for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Huron for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Michigan for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Erie for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Ontario for which I'm willing to pay the given increase in my annual water bill.

Card 2

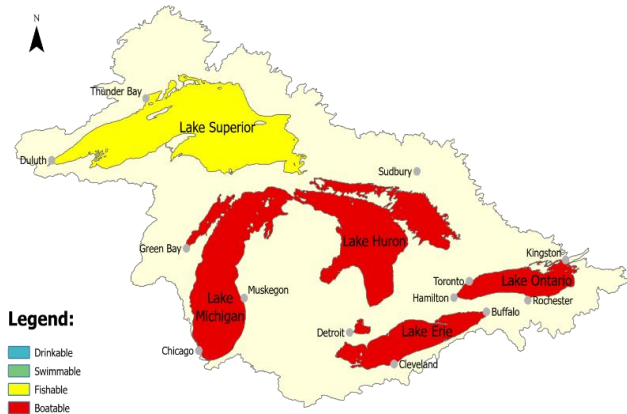Reference situation

Target situation

Q24 Please select which of the situations presented in the maps you prefer most. I prefer:
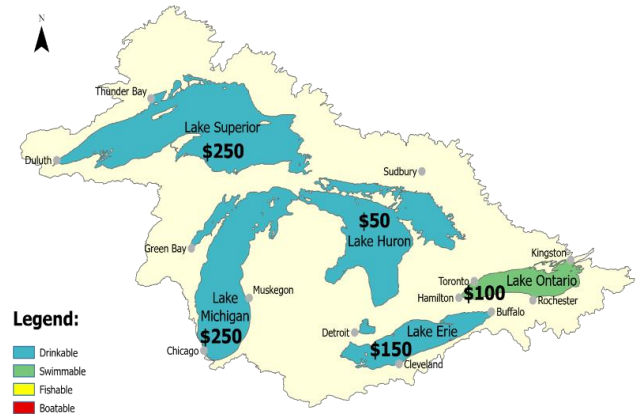(click one option only, namely your most preferred situation)

○ The reference situation. I will not pay anything extra.

○ The target situation for Lake Superior for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Huron for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Michigan for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Erie for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Ontario for which I'm willing to pay the given increase in my annual water bill.

Card 3

Reference situation

Target situation

Q25 Please select which of the situations presented in the maps you prefer most. I prefer:
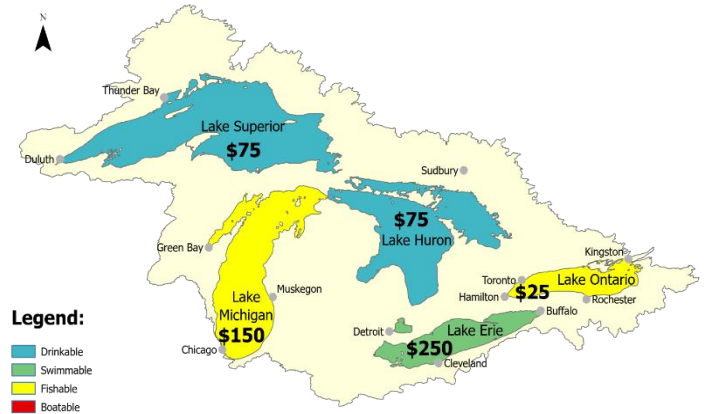(click one option only, namely your most preferred situation)

◯ The reference situation. I will not pay anything extra.

◯ The target situation for Lake Superior for which I'm willing to pay the given increase in my annual water bill.

◯ The target situation for Lake Huron for which I'm willing to pay the given increase in my annual water bill.

◯ The target situation for Lake Michigan for which I'm willing to pay the given increase in my annual water bill.

◯ The target situation for Lake Erie for which I'm willing to pay the given increase in my annual water bill.

◯ The target situation for Lake Ontario for which I'm willing to pay the given increase in my annual water bill.

Card 4

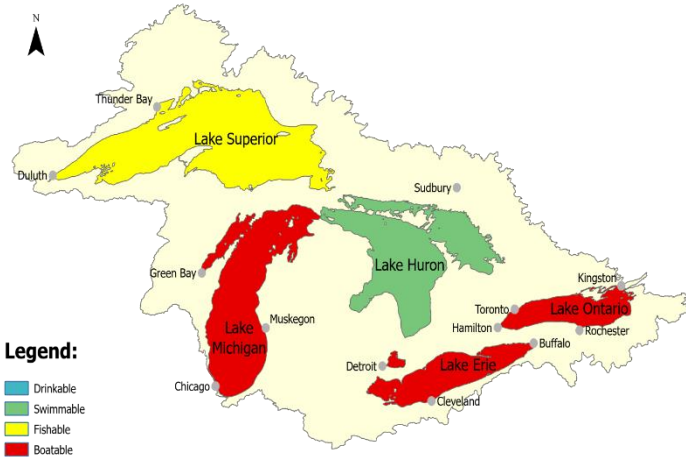Reference situation

Target situation

Q26 Please select which of the situations presented in the maps you prefer most. I prefer:
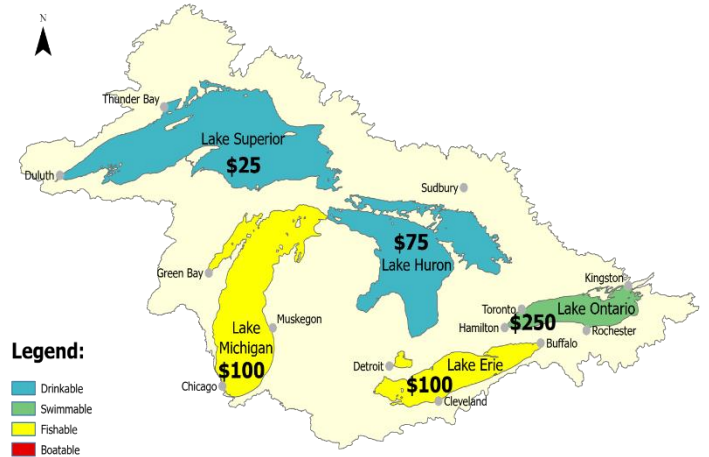(click one option only, namely your most preferred situation)

◯ The reference situation. I will not pay anything extra.

◯ The target situation for Lake Superior for which I'm willing to pay the given increase in my annual water bill.

◯ The target situation for Lake Huron for which I'm willing to pay the given increase in my annual water bill.

◯ The target situation for Lake Michigan for which I'm willing to pay the given increase in my annual water bill.

◯ The target situation for Lake Erie for which I'm willing to pay the given increase in my annual water bill.

◯ The target situation for Lake Ontario for which I'm willing to pay the given increase in my annual water bill.

Card 5

Reference situation

Target situation

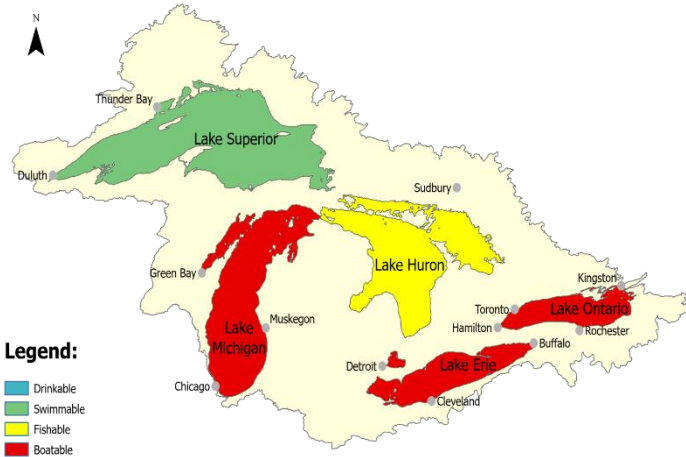

Q27 Please select which of the situations presented in the maps you prefer most. I prefer:
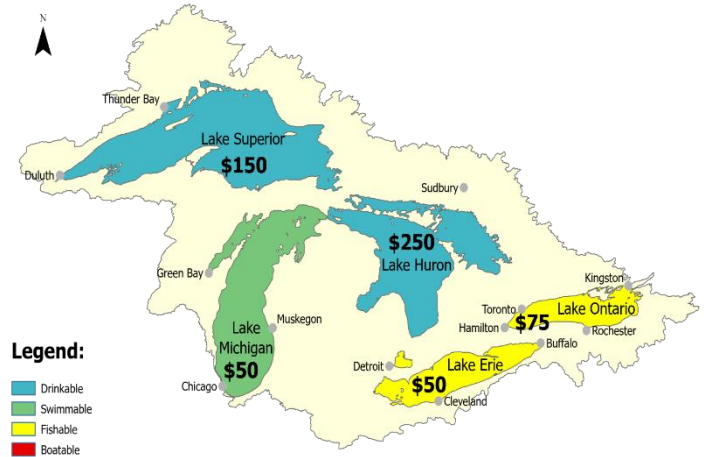(click one option only, namely your most preferred situation)

○ The reference situation. I will not pay anything extra.

○ The target situation for Lake Superior for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Huron for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Michigan for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Erie for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Ontario for which I'm willing to pay the given increase in my annual water bill.

Card 6

Q28 Please select which of the situations presented in the maps you prefer most. I prefer:
(click one option only, namely your most preferred situation)

○ The reference situation. I will not pay anything extra.

○ The target situation for Lake Superior for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Huron for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Michigan for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Erie for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Ontario for which I'm willing to pay the given increase in my annual water bill.

Q29 In the last card you said you would be willing to pay an increase in your annual water bill to improve *(Display the option selected in Q28)*. How much are you willing to pay <u>maximum</u> to achieve this specific situation in the last card? (Click <u>here</u> to show the last card in a new window.)

○ I'm willing to pay maximum $ _____ annually

○ On second thought, I'm not willing to pay anything

Q30 You chose the reference situation in all of the cards, can you explain why?

○ I don't care about water quality improvements in the Great Lakes.

○ I don't have enough income to be able to pay for the proposed water quality improvements.

○ I prefer to spend my money on other things than water quality improvements in the Great Lakes.

○ I don't believe the proposed water quality improvements are feasible or achievable.

○ I don't believe that my money will be spent on water quality improvements in the Great Lakes.

○ The polluter is responsible and should pay for the water quality improvements, not me.

○ The government is responsible and should pay for the water quality improvements, not me.

○ Other reason, please specify _____

Page Break

Q31 Please rank how important each of the following characteristics was each time you chose your most preferred situation.

	Please select one option for each characteristic from the dropdown list
The specific lake where the improvement was proposed	Choose an item.
The specific water quality improvement	Choose an item.
The increase in my annual water and wastewater bill	Choose an item.
Other, namely _____	Choose an item.

Q32-1 Would you be willing to pay an increase in your water and wastewater bill for the sake of the environment and wildlife in the Great Lakes only, without using any of the lakes for recreational or drinking water purposes now and in the future?

◯ No

◯ Yes

◯ I don't know

Q32-2 How much are you willing to pay <u>maximum</u> on behalf of your household for the sake of the environment and wildlife in the Great Lakes only, without using any of the lakes for recreational or drinking water purposes now and in the future for each of the following lakes?

○ Lake Superior $ _____ per year

○ Lake Huron $ _____ per year

○ Lake Michigan $ _____ per year

○ Lake Erie $ _____ per year

○ Lake Ontario $ _____ per year

Section 3: Version 4_ Great Lakes Futures

In this section, we will present you with a number of cards with maps showing possible futures for the Great Lakes. These futures are based on changes in water quality in the lakes.

Water quality, from poorest to best, is represented by the following categories:

- **Poor**:
  Water quality measurements usually exceed water quality guidelines and by a wide margin. Aquatic life (plants and animals) is threatened, impaired or even lost.
- **Moderate**:
Water quality measurements often exceed water quality guidelines and by a considerable margin. Aquatic life (plants and animals) may be threatened or impaired.

- **Good**:
  Water quality measurements rarely exceed water quality guidelines and usually by a narrow margin. Aquatic life (plants and animals) is protected with only a minor degree of threat or impairment.
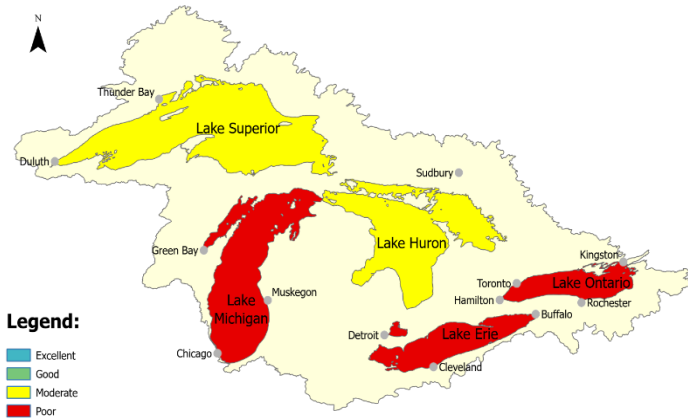- **Excellent**:
  Water quality measurements never or very rarely exceed water quality guidelines. Aquatic life (plants and animals) is not threatened or impaired.

- Each card shows a map with a **reference** water quality situation in the Great Lakes and a possible **target** water quality situation.

- The **reference** situation depicts the situation if no extra pollution abatement action is undertaken.

- The **target** situation can only be achieved if extra pollution abatement measures are implemented in industry, agriculture and urban areas around the Great Lakes.

- These measures improve water quality in the **target** situation compared to the **reference** situation in Lake Michigan, Erie and Ontario from *poor* to *moderate*, *good* or *excellent*.

- The measures prevent water quality deterioration in Lake Superior and Huron, where water quality remains *excellent* and does not deteriorate to *good*, *moderate* or *poor*.

- The extra pollution abatement actions cost money. These costs will be borne by all sectors in society, including industry, agriculture and households like yours.

- We are interested in hearing from you which water quality you prefer for which Great Lake and how much you are willing to contribute financially to achieve this.

- Every household will be asked to contribute financially by paying a higher water and wastewater bill - called water bill hereafter - than you currently pay to achieve your preferred water quality in your preferred lake.

- Your choices will help inform decision-making to identify which lakes should receive priority in restoring water quality or preventing water quality deterioration.

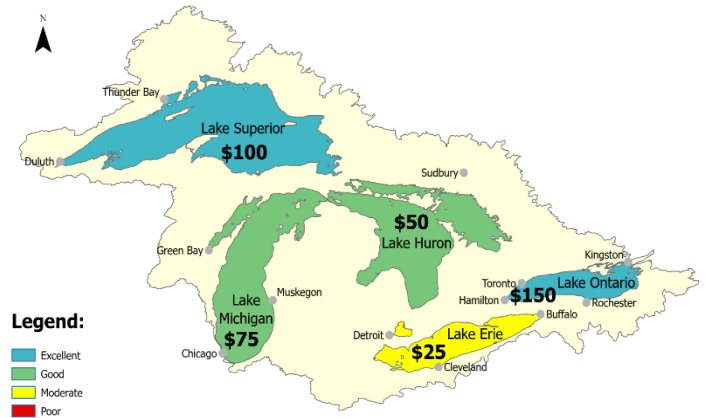- You will be shown an example card with explanation first.

Example card

for a detailed explanation click here

Reference situation

Target situation

Q22 Please select which of the situations presented in the maps you prefer most. I prefer:
(click one option only, namely your most preferred situation)

◯ The reference situation. I will not pay anything extra.

◯ The target situation for Lake Superior for which I'm willing to pay the given increase in my annual water bill of $100.

◯ The target situation for Lake Huron for which I'm willing to pay the given increase in my annual water bill of $50.

◯ The target situation for Lake Michigan for which I'm willing to pay the given increase in my annual water bill of $75.

◯ The target situation for Lake Erie for which I'm willing to pay the given increase in my annual water bill of $25.

◯ The target situation for Lake Ontario for which I'm willing to pay the given increase in my annual water bill of $150.

Explanation:

The map on the left-hand-side shows the **reference situation** if no extra pollution abatement measures are taken, and water quality is *poor* in:

- Lake Michigan
- Lake Erie
- Lake Ontario

and *moderate* in:

- Lake Superior
- Lake Huron.

The map on the right-hand side shows the **target situation** where extra pollution abatement actions:

- Improve water quality:

- from *poor* to *good* in Lake Michigan, increasing your annual water bill by $75 ($6.25/month)
- from *poor* to *moderate* in Lake Erie, resulting in an increase of your annual household water bill by $25 ($2.10/month)
- from *poor* to *excellent* in Lake Ontario, increasing your annual water bill by $150 ($12.50/month).
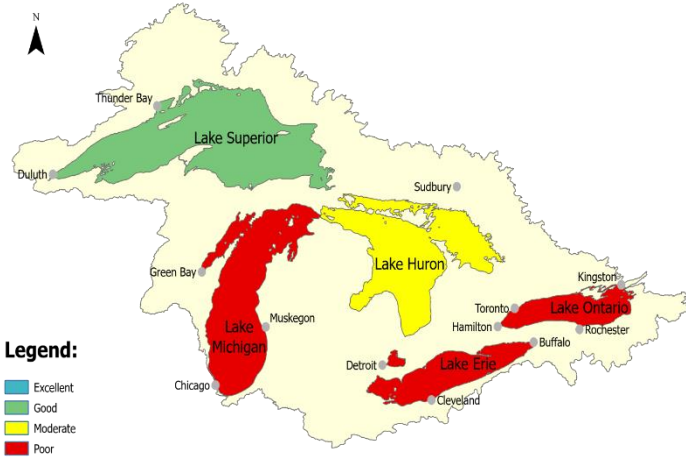
- Prevent the deterioration of water quality:

- from *excellent* to *moderate* in Lake Superior, resulting in an increase of your annual household water bill by $100 ($8.35/month)
- from *good* to *moderate* in Lake Huron, increasing your annual water bill by $50 ($4.15/month).

If you prefer the reference situation for the Great Lakes where water quality remains the same for Lake Michigan, Erie and Ontario and water quality deteriorates for Lake Superior and Huron, your household's water bill will remain the same and you do not pay anything extra ($0).
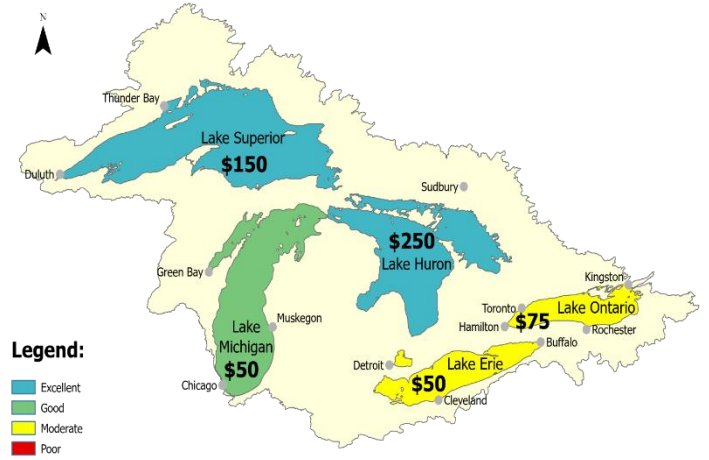
- You will now see 6 more of these cards. Please select each time which of the situations you prefer most.

- Please answer as truthfully as possible and think about your true willingness to pay the increase in your yearly water bill, keeping in mind your other expenses and priorities.

- The results from this survey will be used to inform policy and decision-making to identify which lakes should receive priority in restoring water quality or preventing water quality deterioration.

Card 1

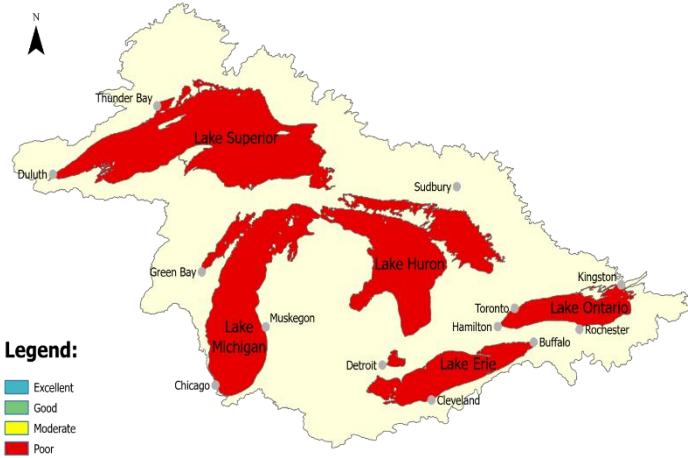### Reference situation

Target situation

Q23 Please select which of the situations presented in the maps you prefer most. I prefer:
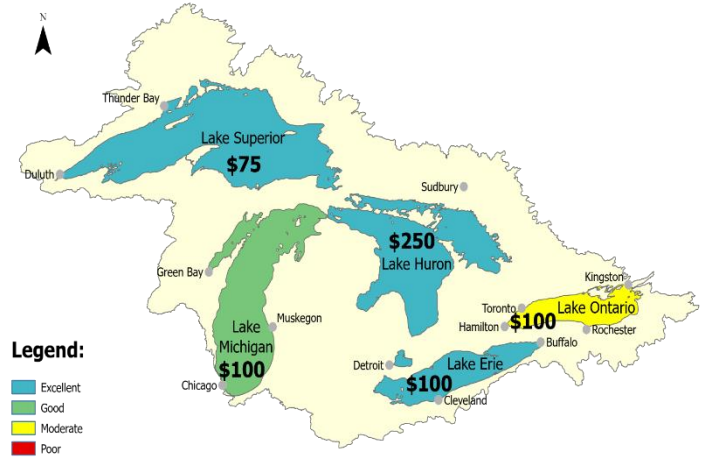(click one option only, namely your most preferred situation)

○ The reference situation. I will not pay anything extra.

○ The target situation for Lake Superior for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Huron for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Michigan for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Erie for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Ontario for which I'm willing to pay the given increase in my annual water bill.
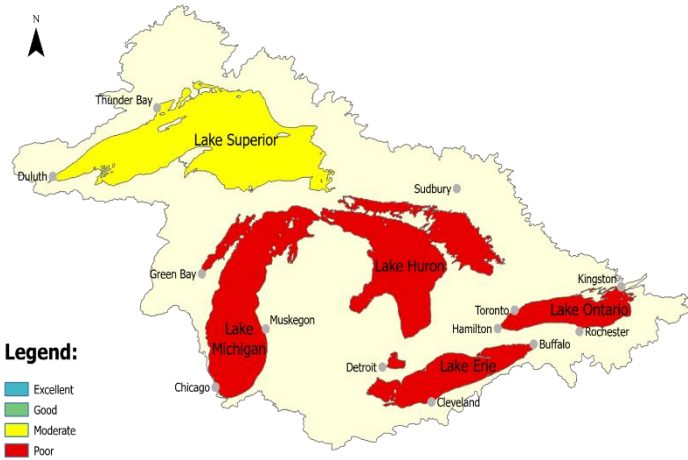
Card 2

Q24 Please select which of the situations presented in the maps you prefer most. I prefer:
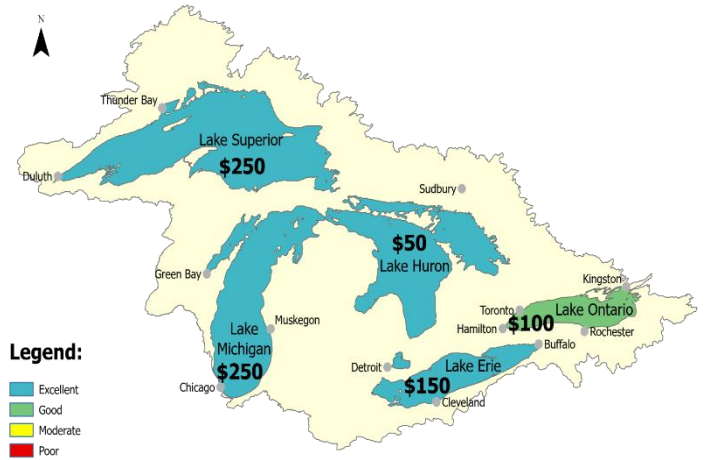(click one option only, namely your most preferred situation)

○ The reference situation. I will not pay anything extra.

○ The target situation for Lake Superior for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Huron for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Michigan for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Erie for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Ontario for which I'm willing to pay the given increase in my annual water bill.
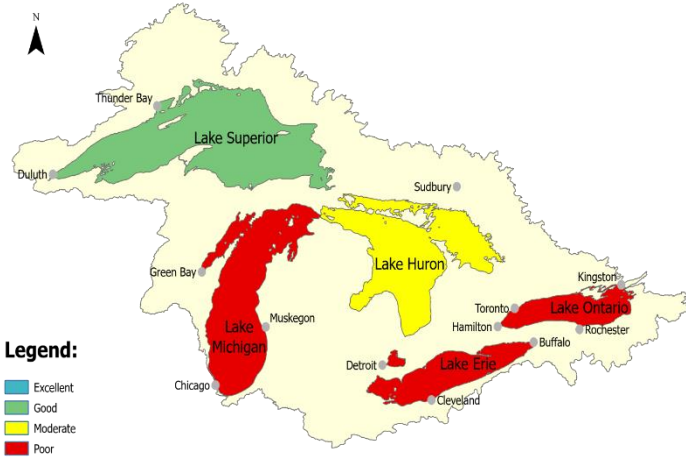
Card 3

Reference situation

Target situation

Q25 Please select which of the situations presented in the maps you prefer most.I prefer:
(click one option only, namely your most preferred situation)

○ The reference situation. I will not pay anything extra.

○ The target situation for Lake Superior for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Huron for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Michigan for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Erie for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Ontario for which I'm willing to pay the given increase in my annual water bill.

Card 4

Reference situation

Target situation

Q26 Please select which of the situations presented in the maps you prefer most. I prefer:
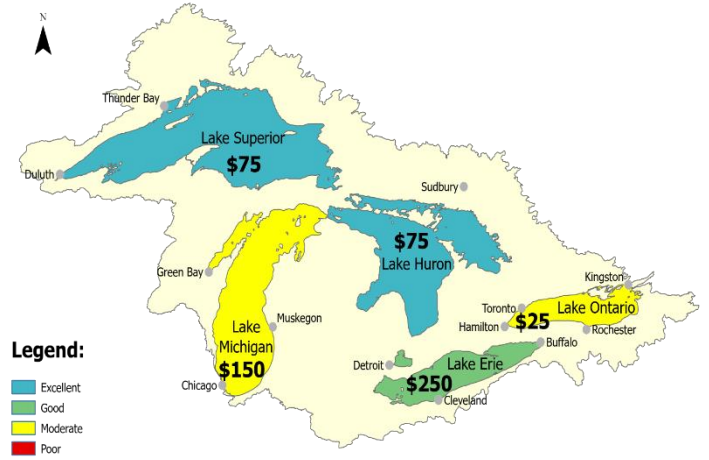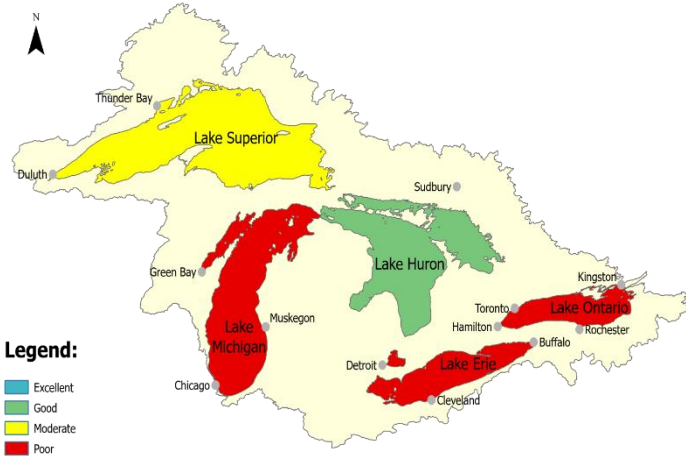(click one option only, namely your most preferred situation)

○ The reference situation. I will not pay anything extra.

○ The target situation for Lake Superior for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Huron for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Michigan for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Erie for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Ontario for which I'm willing to pay the given increase in my annual water bill.

Card 5

Reference situation

Target situation

Q27 Please select which of the situations presented in the maps you prefer most. I prefer:
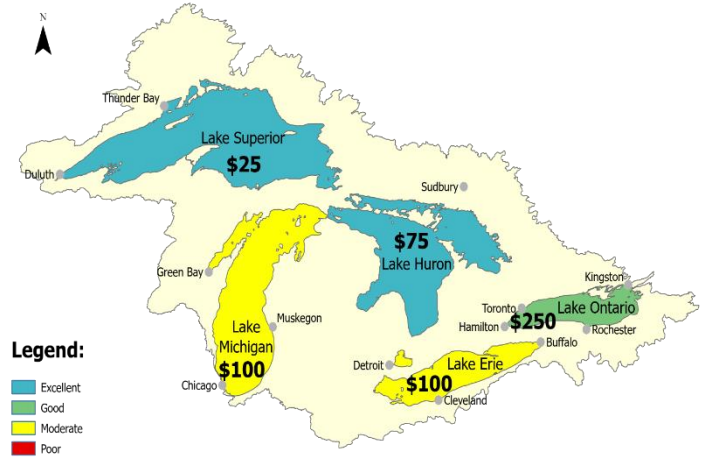(click one option only, namely your most preferred situation)

○ The reference situation. I will not pay anything extra.

○ The target situation for Lake Superior for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Huron for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Michigan for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Erie for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Ontario for which I'm willing to pay the given increase in my annual water bill.
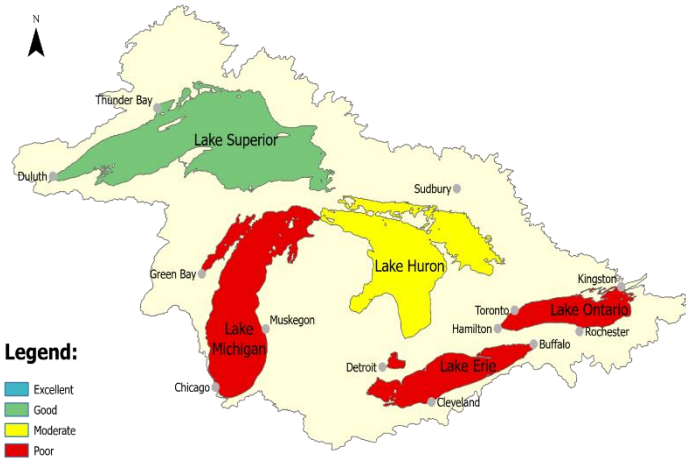
Card 6

Reference situation

Target situation

Q28 Please select which of the situations presented in the maps you prefer most. I prefer:
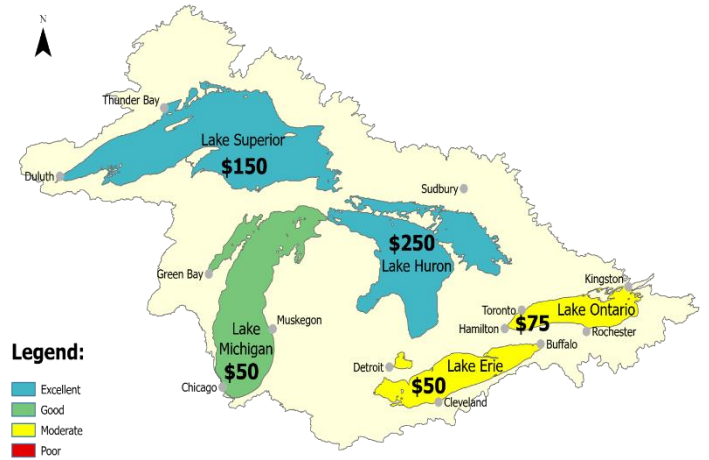(click one option only, namely your most preferred situation)

○ The reference situation. I will not pay anything extra.

○ The target situation for Lake Superior for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Huron for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Michigan for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Erie for which I'm willing to pay the given increase in my annual water bill.

○ The target situation for Lake Ontario for which I'm willing to pay the given increase in my annual water bill.

Q29 In the last card you said you would be willing to pay an increase in your annual water bill to improve *(Display the option selected in Q28)*. How much are you willing to pay <u>maximum</u> to achieve this specific situation in the last card? (Click <u>here</u> to show the last card in a new window.)

○ I'm willing to pay maximum $ _____ annually

○ On second thought, I'm not willing to pay anything

Q30 You chose the reference situation in all of the cards, can you explain why?

○ I don't care about water quality improvements in the Great Lakes.

○ I don't have enough income to be able to pay for the proposed water quality improvements.

○ I prefer to spend my money on other things than water quality improvements in the Great Lakes.

○ I don't believe the proposed water quality improvements are feasible or achievable.

○ I don't believe that my money will be spent on water quality improvements in the Great Lakes.

○ The polluter is responsible and should pay for the water quality improvements, not me.

○ The government is responsible and should pay for the water quality improvements, not me.

○ Other reason, please specify _____

Q31 Please rank how important each of the following characteristics was each time you chose your most preferred situation.

	Please select one option for each characteristic from the dropdown list
The specific lake where the improvement was proposed	Choose an item.
The specific water quality improvement	Choose an item.
The increase in my annual water and wastewater bill	Choose an item.
Other, namely _____	Choose an item.

Q32-1 Would you be willing to pay an increase in your water and wastewater bill to improve or protect water quality in the Great Lakes only for recreational (boating, fishing, swimming) or drinking water purposes now and in the future?

○ No

○ Yes

○ I don't know

Q32-2 How much are you willing to pay <u>maximum</u> on behalf of your household for recreational or drinking water purposes only now and in the future for each of the following lakes?

○ Lake Superior $ _____ per year

○ Lake Huron $ _____ per year

○ Lake Michigan $ _____ per year

○ Lake Erie $ _____ per year

○ Lake Ontario $ _____ per year

Section 4: Your household profile.

These last few questions will help us understand how representative our sample is. Your identity will be kept confidential.

Q33 What is the highest degree or level of schooling that you have completed?

○ Primary school

○ High school or equivalent

○ College degree

○ Bachelor degree

○ Professional degree

○ Master degree

○ PhD degree

○ Other, please specify _____

Q34 Please click the range of values that best represents your total household income from all sources before tax?

○ $0-$5,000	○ $100,000-$124,999
○ $5,001-$9,999	○ $125,000-$149,999
○ $10,000-$19,999	○ $150,000-$174,999
○ $20,000-$29,999	○ $175,000-199,999
○ $30,000-$39,999	○ $200,000-$224,999
○ $40,000-$49,999	○ $225,000-$249,999
○ $50,000-$59,999	○ $250,000-$274,999
○ $60,000-$69,999	○ $275,000-$299,999
○ $70,000-$79,999	○ $300,000-$324,999
○ $80,000-$89,999	○ $325,000-$349,999
○ $90,000-$99,999	○ Over $350,000
	Prefer not to answer

Q35 Do you belong to a nature or environmental protection organization? (Please select all that apply)

☐ No

☐ Yes, I'm a member

☐ Yes, I'm a donor

☐ Yes, I volunteer

☐ Yes, I work for an environmental protection organization

Q38 Do you own or rent the house in which you currently live?

○ I own the house

○ I rent the house

○ Other, specify _____

Q40 How many people are living or staying at your current address?   (Include yourself and any other adults or children who are currently living or staying at this address as part of your household)

○1 ○2 ○3 ○4 ○5 ○6 ○7 ○8 ○9 ○10 ○11 ○12 ○12+

Q41 How many children under the age of 18 are living in your household? Please include only the children for which you are the parent or legal guardian. If there are no children under 18 in your household, please type 0.

_____

This is the end of the questionnaire.
You may now submit it.

YOUR QUESTIONNAIRE HAS BEEN SUCCESSFULLY SUBMITTED!

We would like to thank you for your participation in this study on the Great Lakes. The data collected during the survey will contribute to a better understanding of the different water uses in the Great Lakes region, and ultimately aim to inform decision-makers on efforts to improve water quality conditions.

If you are interested in receiving more information regarding the results of this study, will be posted in the Library and Archives Canada at a later date.