2024 GREAT LAKES REGIONAL POLL

Telephone Poll Report

A report submitted to the
International Joint Commission by the
Great Lakes Water Quality Board
Engagement Work Group

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oraclepoll RESEARCH

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List of Acronyms

IJC International Joint Commission

WQB Great Lakes Water Quality Board

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1.0 Methodology and Logistics

1.1 Background and overview

In 2015, Oraclepoll conducted the first baseline Great Lakes basin random telephone poll for the International Joint Commission (IJC) Great Lakes Water Quality Board (WQB) among residents of the Great Lakes basin catchment area. There were 2018 and 2021 follow-ups that were modified but several benchmark questions were tracked and reported. In 2021, the board also conducted a non-random online version of the phone poll. A non-random online poll was conducted again in 2024, with the results reported separately.[1]

This 2024 randomized telephone poll of 4,550 respondents is the fourth data point in the board's longitudinal study. Several questions remain the same across the 2015, 2018, 2021 and 2024 polls, and several others repeated across several years through 2024. The 2024 poll is also different from past polls: new questions were added, some were dropped, and several were modified with wording or scale changes. The 2024 changes included adding new questions related to detailed issues affecting the Great Lakes, the impact of climate change, water demand, local watershed protection and perceptions of the future of the Great Lakes. When and where possible, 2024 poll findings are compared with past poll findings to determine any statistically significant variances or similarities.

1.2 Design

Oraclepoll designed the telephone poll instrument in consultation with the board's Engagement Work Group. The questions for the 2024 telephone poll were modified to add new questions and drop others, but many have remained consistent and comparable to the previous three polls.

The 2024 poll was first pilot tested among a sample of five respondents prior to full data collection to ensure clarity of question design, length and to eliminate technical errors in the computer assisted telephone interviewing programming.

1.3 Polling method

Oraclepoll conducted the poll using computer-assisted telephone interviewing with live researchers. All the person-to-person calls were made by Oraclepoll research staff. Oraclepoll management monitored 20 percent of all interviews and supervised 100 percent of the interviews for quality assurance.

Initial calls to each number were made between the hours of 6:00 p.m. and 9:00 p.m. within each respective time zone. Subsequent call-backs of no-answers and busy numbers were made up to

[1] The 2024 online poll results report is available on the Great Lakes Water Quality Board's website at: ijc.org/wqb/2024-great-lakes-poll.

five times from 10:00 a.m. to 9:00 p.m., within each respective time zone, over a seven-day period until contact was made. In addition, telephone interview appointments were attempted with those respondents unable to complete the survey at the time of contact. Those refusing the telephone poll were offered the option to complete the survey online. If no contact was made at a number after the fifth attempt, the number was discarded, and a new one was used.

1.4 Logistics

Oraclepoll conducted interviews between February 1 and March 9, 2024.

1.5 Sample frame

A randomized dual sample frame telephone database was used, that included cellular as well as landline phone numbers of residents living in the Great Lakes basin (**Figure 1**).

Figure 1. Map of the Great Lakes basin. The telephone poll database used cellular and landline numbers located within the basin area. Map source: Great Lakes Information Network.

1.6 Study sample and error rates

In total, 4,550 interviews were completed among residents 18 years of age and older, the same as in 2021.

As in 2021, quotas were set to reflect the populations of the nine political jurisdictions (states and the province of Ontario) that comprise the Great Lakes basin catchment area and its approximate 34 million residents. This involved a base sample of 3,950 respondents.

Also, the same as the 2021 poll, additional quotas were set for First Nation, Métis and Tribal Nation member respondents and those residing on islands in the Great Lakes. Oversampling ensured that 500 First Nation, Métis or Tribal Nation members and 100 island residents completed the poll. This was achieved through geotargeting phone numbers and by asking screening questions at the start of the poll.

The margin of error for the total 4,550 survey sample is ±1.5 percent, 19 out of 20 times. **Table 1** below outlines the completed number (N) of interviews and margin of error for each jurisdiction and oversampled cohort.

Table 1. Sample size (N) and margin of error for each political jurisdiction (states and province) and oversampled cohort (islanders and self-identifying Indigenous and Métis individuals).

JURISDICTIONS	Sample Size (N)	Error Rate (95%)
Ontario	N=1100	±2.9%
Michigan	N=1100	±2.9%
New York	N=450	±4.6%
Ohio	N=350	±5.2%
Illinois	N=350	±5.2%
Wisconsin	N=280	±5.9%
Indiana	N=120	±8.9%
Pennsylvania	N=100	±9.8%
Minnesota	N=100	±9.8%
SUBTOTAL	N=3950	±1.6%
Indigenous Oversample	N=500	±8.3%
Island Resident Oversample	N=100	±9.8%
TOTAL	N=4550	±1.5%

The First Nations, Métis, and Tribal Nation member respondent breakdown by area is as follows: Ontario N=226, Michigan N=77, Wisconsin N=38, Minnesota N=36, Indiana N=28, New York N=25, Ohio N=25, Illinois N=25 and Pennsylvania N=20. In addition, respondents were asked for their Postal/ZIP codes. These codes were used to further identify respondents by their community of interest as it relates to which of the five Great Lakes catchment basins in which they reside. These areas were used for further insight and analysis.

Table 2 below includes the completed number (N) of interviews for the sample by basin or community of interest and their percentage (%) of the total completed sample.

Table 2. Completed number (N) of interviews and percentage (%) of total sample, by lake basin.

BASIN	Sample (N)	%
Lake Ontario	1,028	23.1
Lake Michigan	1,138	25.6
Lake Erie	1,689	38.0
Lake Huron	271	6.1
Lake Superior	324	7.3
Total	4,550	100.0

1.7 Reporting notes

This report contains the findings of the poll in the order that questions were asked. Where and when possible, data is referenced and compared over the four survey periods (2015, 2018, 2021, and 2024). Oraclepoll also provided the board with complete results and crosstabulations.

Variances or statistically significant differences as a function of area and demographics are highlighted. Only statistically significant effects are referenced, and these effects are significant at the $p < .05$ level, which means there are less than five chances in 100 that a reported effect does not reflect a true effect.

Some numbers displayed in charts and graphs may not add up to 100 percent as a result of rounding.

2.0 Opening Questions

The first set of introductory questions asked all respondents how long they have lived in the Great Lakes region. More than eight in ten or 82 percent are long-term residents living in the area for more than 20 years. **Figure 2** illustrates responses to this first question about residence.

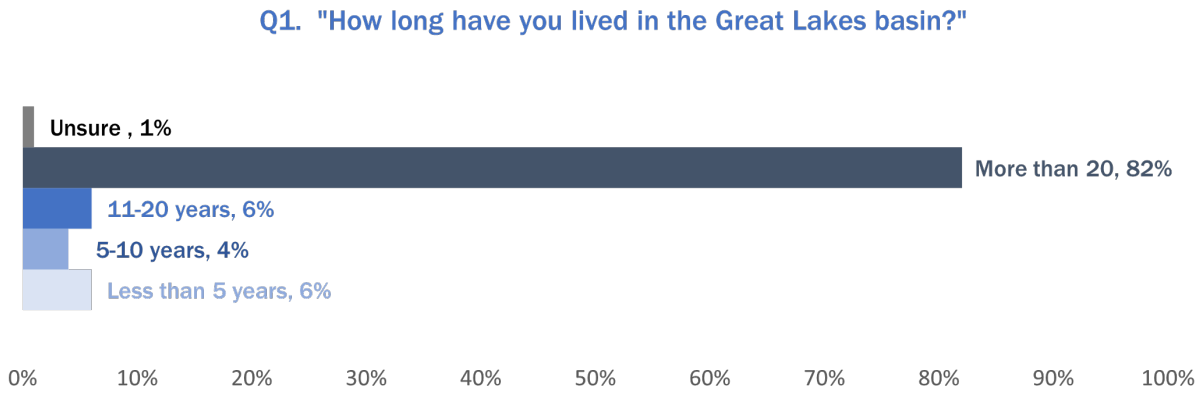

Figure 2. Length of time respondents lived in the Great Lakes basin.

Next, all respondents were asked what Great Lake (or body of water) they live closest to (**Figure 3**).

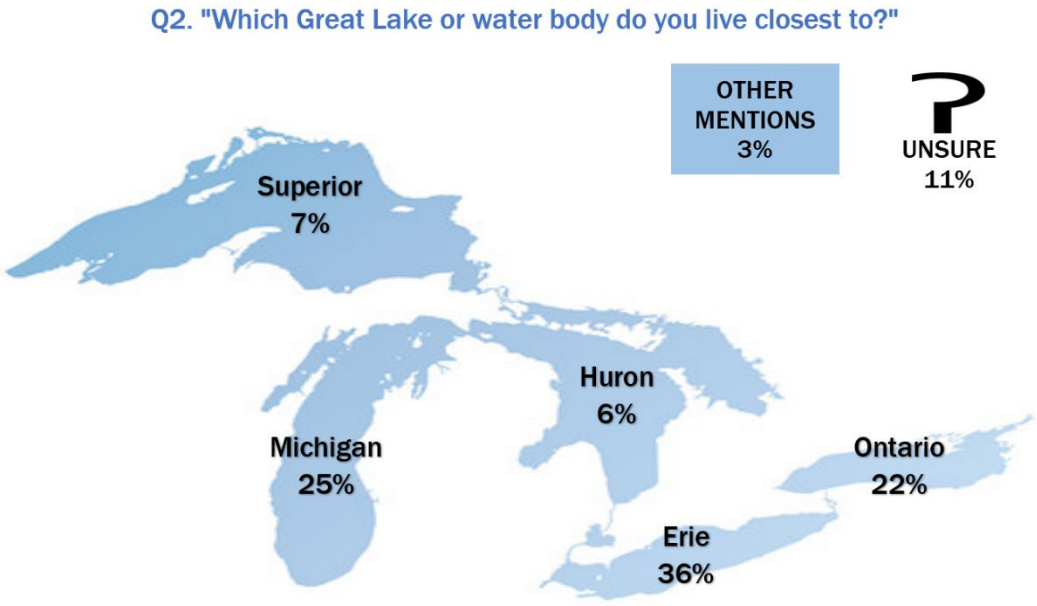

Figure 3. The Great Lake (or body of water) respondents live closest to.

3.0 Water Quality Concerns and Issues

3.1 Status and direction of water quality

In a newly worded question, respondents were asked to rate the water quality of the Great Lake they said they live closest to in Question 2. Thirty-seven percent answered good or very good and 33 percent poor or very poor, while 20 percent were neutral (neither poor nor good) and 11 percent did not know (**Figure 4**). Total poor and total good findings by lake are also displayed below.

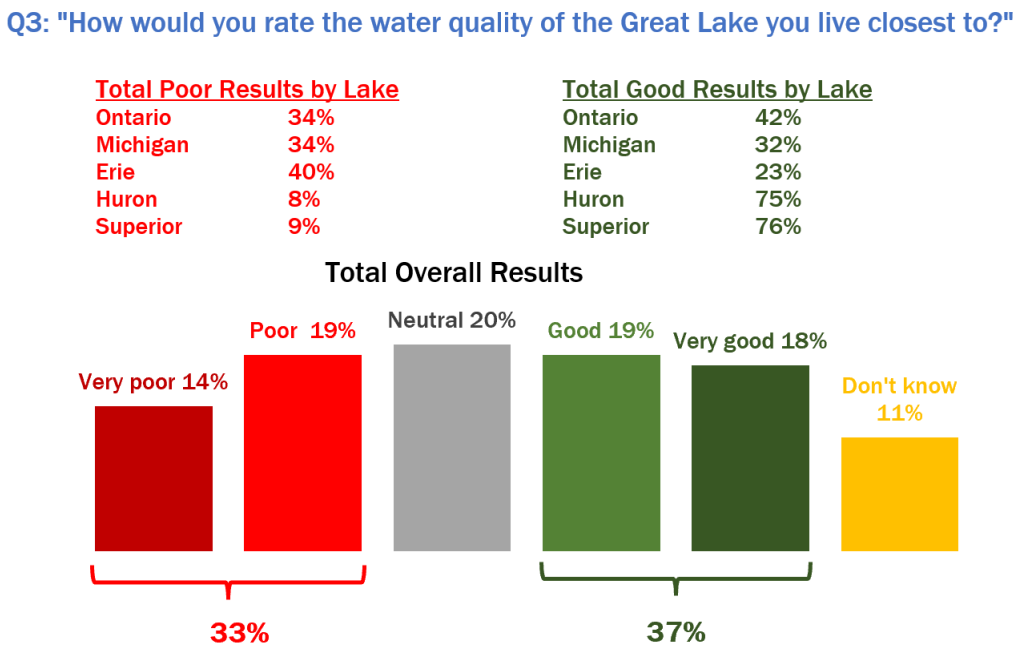

Figure 4. Rating of the water quality of the Great Lake respondents live closest to.

In 2021 when asked to rate the environmental health and water quality of the lake they said they were most connected with, 29 percent answered good or very good.

In a question that has been modified from previous years, respondents were asked about the trend of the water quality of the lake they said they live closest to in Question 2 (**Figure 5**).

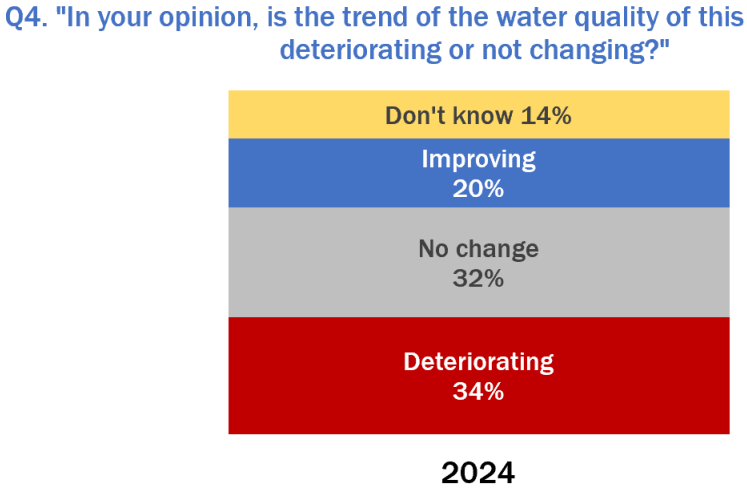

Figure 5. Ratings of the trend of the water quality of the Great Lakes.

Table 3. Ratings of the trend of the water quality of the Great Lakes, by the lake respondents live closest to.

Q4. In your opinion, is the trend of the water quality of this Lake improving, deteriorating, or not changing?

	Improving	Deteriorating	Not changing	Don't know
Lake Ontario	20%	34%	34%	12%
Lake Michigan	23%	34%	27%	16%
Lake Erie	17%	39%	28%	16%
Lake Huron	24%	14%	50%	12%
Lake Superior	29%	18%	45%	7%

Respondents were next asked in an open or unaided question to identify what they believed was the most significant problem facing the lake lived closest to in Question 2 (**Table 4**).

Table 4. Most significant problem or challenge facing the lake respondents live closest to.

Q5. "When thinking about the water quality of this lake, what in your opinion is its most significant problem or challenge?"

Invasive species (plants, fish, mussels)	20%
Don't know	12%
Industrial pollution	10%
Pollution (in general)/chemicals	10%
Drainage/municipal runoff/sewage/*E. coli*	9%
Algae/green algae/blooms (causes of)	9%
Water levels/fluctuations	5%
Agricultural pollution/fertilizers, nutrients/animal waste/runoff	5%
Waste being dumped into the lakes	4%
Climate change/extreme weather	4%
Oil industry/spills/oil pipelines	3%
Development (housing, sprawl, industry)	3%
Endangered species/fishing depleted in the lakes	2%
Plastics	1%
Erosion/damage to wetlands, shores	1%
Lack of regulations/policy/education	1%
Water quality/clarity	1%
Shipping/boats (traffic/spills/bilge)	<1%
Acid rain/air pollutants from industry/emissions	<1%
Water diversion/extraction	<1%
Government policy/inaction	<1%

The top single mention related to invasive species, while industrial as well as pollution in general were next most referenced. Other top challenges related to runoff from municipalities, algae, water levels, agricultural pollution, climate change and waste/garbage entering their lake. Below (**Table 5**) are the top results by the lake named in Question 2 or the one that is closest to where respondents live.

Table 5. Crosstabulation of top mentioned most significant problem or challenge, by the lake respondents live closest to.

	Invasive species (plants, fish, mussels)	Industrial pollution	Pollution/ chemicals	Drainage/ municipal runoff/sewage /*E. coli*	Algae/ green algae/ blooms (causes of)	Water levels/ fluctuations	Agricultural pollution/ fertilizers/ nutrients/runoff
Ontario	20%	13%	2%	13%	5%	9%	2%
Michigan	19%	12%	12%	12%	2%	3%	2%
Erie	19%	10%	9%	6%	19%	5%	9%
Huron	25%	6%	16%	7%	2%	5%	2%
Superior	21%	5%	17%	8%	2%	1%	1%

3.2 Safety of the water

Respondents rated how safe it is to swim, drink water and eat fish from the Great Lake that they live closest to (**Figure 6**). Wording changed from 2021 where the question was about the lake respondents were most connected with to the lake they live closest to.

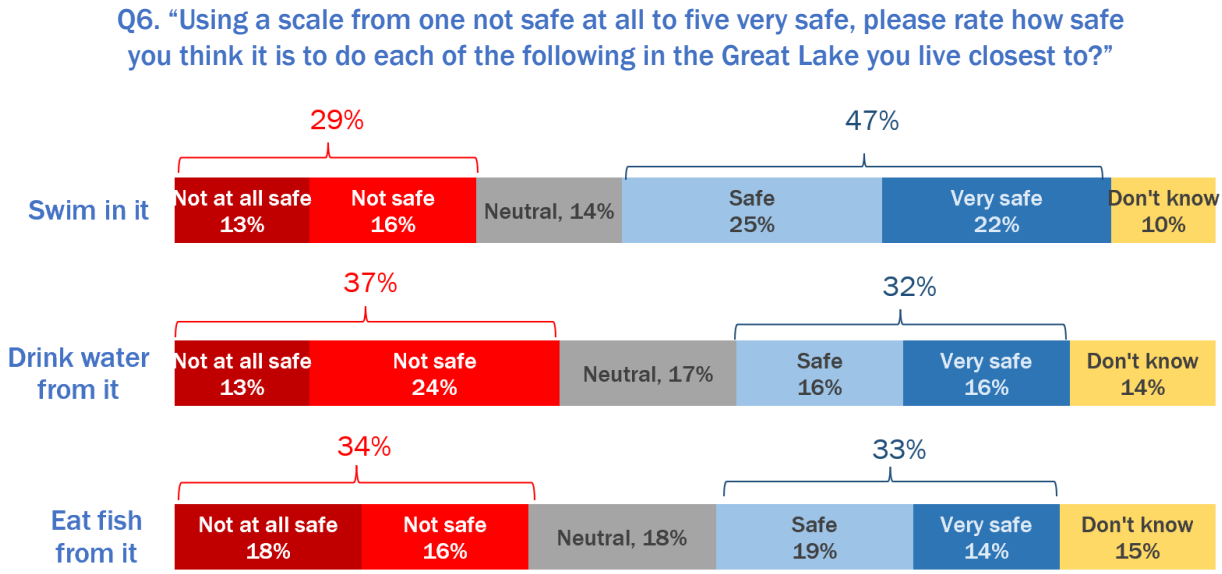

Figure 6. Safety ratings for the lake respondents live closest to on the perceived safety to swim in the lake, drink water from it and eat fish from it.

When reviewing the results, casual observations reveal that concerns over safety, as evidenced by responses of not safe and not at all safe, were highest for drinking water from the Great Lake closest to them at 37 percent. Results are somewhat better when it comes to eating fish from the lake with 34 percent feeling this is unsafe and 33 percent safe or very safe. Safe and very safe numbers were best for swimming at 47 percent, while not safe and not at all safe findings were lowest at 29 percent.

There are significant variances as a function of the Lake respondents are closest to ($p < .001$) with swimming safety concerns highest among those living near Lakes Erie (43 percent) and Ontario (30 percent), with drinking water not safe/not at all safe numbers highest among those closest to Erie (48 percent), Ontario (40 percent) and Michigan (36 percent). Eating fish not at all safe/not safe findings were also highest among residents living near Lake Erie (48 percent), and to a lesser extent Lake Ontario (34 percent) and Lake Michigan (29 percent).

3.3 Health and water quality of the Great Lakes basin overall

In a question first tracked in 2015, respondents were asked to rate the importance of protecting the health and water quality of the Great Lakes basin (**Figure 7**).

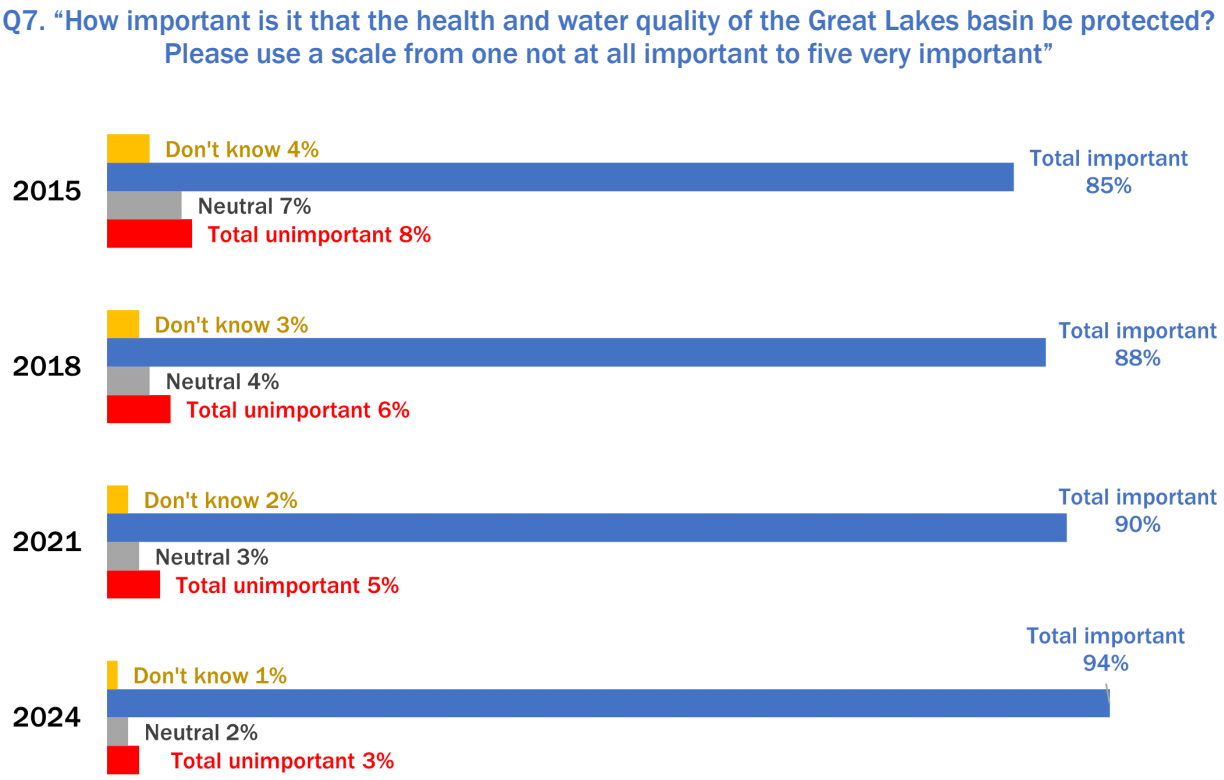

Figure 7. Importance that the health and water quality of the Great Lakes be protected.

There is continued upward increase (+4 percent over 2021) in the percentage of residents that feel it is important or very important, at 94 percent, that the health and water quality of the Great Lakes basin be protected. Combined total importance was strong and consistent across all Lakes and demographic cohorts with no significant differences.

Respondents then rated the impact that each of 11 issues may have on the environmental health and water quality of the Great Lakes (**Table 6**). The Likert scale was re-worded from the 2021 poll, from a five point to a three-point scale of no negative impact, neutral and negative impact.

Table 6. The impact that each of 11 issues may have on the environmental health and water quality of the Great Lakes.

Q8. "How much of an impact do you feel that each of the following have on the environmental health and water quality of the Great Lakes?"

	No negative impact	Neutral	Negative impact	Do not know
A. Climate change/global warming	12%	10%	77%	<1%
B. Flooding	13%	14%	73%	<1%
C. Nuclear waste	20%	17%	60%	3%
D. Loss of wetlands	11%	12%	74%	3%
E. Farm runoff including, manure, animal waste and fertilizers	9%	9%	81%	<1%
F. Municipal wastewater sewage, or stormwater runoff	4%	9%	86%	1%
G. Algae blooms	6%	5%	88%	1%
H. Invasive species such as zebra and quagga mussels, Asian carp	8%	5%	86%	1%
I. The petroleum industry, such as pipelines, drilling, fracking	13%	19%	64%	4%
J. Plastics/microplastics	9%	2%	88%	1%
K. Offshore wind turbines	26%	15%	53%	6%

Highest rated in terms of a negative impact were algae blooms and plastics followed by municipal runoff and invasive species. The highest scores for no negative impacts were for nuclear waste and offshore wind turbines.

All respondents were asked to rate the overall health of the Great Lakes using a three-point scale of poor, fair or good (**Figure 8**).

Q9. "Using scale of poor, fair or good how would you rate the overall health of the Great Lakes?"

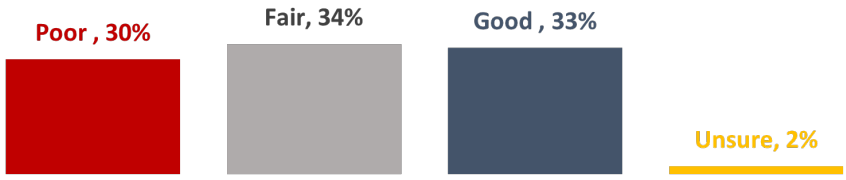

Figure 8. Rating the overall health of the Great Lakes.

Results reveal a three-way split of opinion with three in ten saying poor, one-third good and 34 percent fair, while 2 percent were unsure.

3.4 Understanding of the issues facing the Great Lakes

In a question new to the 2024 poll, respondents were asked to rate their understanding of nine areas related to the state of the Great Lakes, using a three-point scale of poor, fair or good (**Table 7**).

Table 7. Rating the understanding of nine areas related to the state of the Great Lakes.

Q10. "Please rate your understanding of each of the following areas related to the state of the Great Lakes using the scale of poor, fair or good."

	Poor	Fair	Good	Do not know
A. Drinking water	11%	42%	41%	6%
B. Water quality at beaches	11%	50%	36%	3%
C. Fish consumption	14%	46%	32%	8%
D. Toxic chemicals	31%	37%	16%	17%
E. Habitat and species	20%	42%	34%	4%
F. Nutrients and algae	37%	38%	19%	7%
G. Invasive species	47%	29%	20%	5%
H. Groundwater	15%	43%	24%	17%
I. Watershed impacts of climate	28%	36%	20%	16%

Understanding as expressed by responses of good were low across all categories but the combined fair and good responses were highest for drinking water (83 percent), water quality at beaches (86 percent), fish consumption (78 percent) and habitat and species (76 percent). Lowest understanding and the highest poor scores were for invasive species, nutrients and algae, toxic chemicals and watershed impacts of climate.

3.5 Impact of climate change

In a three-part question new to the 2024 poll, respondents were asked to rate their level of concern that climate change will have on the three areas below (**Table 8**). A five-point scale from one not at all concerned to five very concerned was used and the table below highlights the combined unconcerned (1-not at all concerned and 2-not concerned) as well as the total concerned (4-concerned and 5-very concerned) results.

Table 8. Concern that climate change will impact water quality, water quantity and community well-being.

Q11. "In your opinion, how concerned are you that climate change will impact the following? Please use a scale from one not at all concerned to five very concerned."

	Total Unconcerned (1 and 2)	3 Neither concerned nor unconcerned	Total Concerned (4 and 5)	Do not know
Water quantity	12%	10%	77%	1%
Water quality	10%	7%	83%	1%
Community well-being	9%	9%	81%	1%

While total concern was high across all categories, it was higher for water quality and community well-being.

Another question new to the 2024 poll asked respondents if climate change will put more pressure on the Great Lakes (**Figure 9**) of which nine in ten answered yes.

Q12. "As the global climate changes do you think the Great Lakes will have more pressure put on them?"

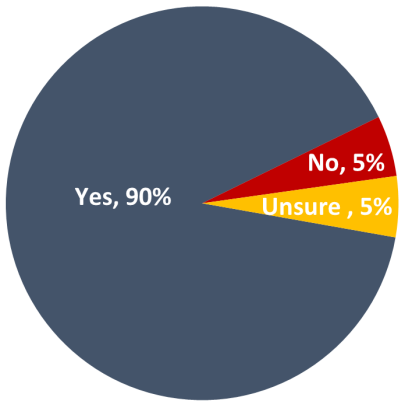

Figure 9. Climate change and pressure on the Great Lakes.

4.0 Drinking Water Topics

In 2024, further modifications were made to questions about drinking water and new questions were added to the poll. Respondents were asked about their drinking water, starting with an unaided probe about the source of their drinking water (**Table 9**).

Table 9. Source of drinking water.

Q13. "Where does your drinking water come from?"	
Great Lakes	34%
Groundwater (well/spring/private well)	25%
Local lake or river	21%
Bottled water/water company	9%
Don't know	8%
Municipal water/tap	2%

Respondents were then asked to rate their level of agreement with four statements related to the quality of and access to their drinking water and treatment of wastewater (**Table 10**). A five-point rating scale was used, and the table below combines the total disagree (1-strongly disagree and 2-disagree) as well as the total agree (4-agree and 5-strongly agree) responses. Question 14B is new to this survey wave.

Table 10. Agreement statements related to community drinking water.

Q14. "Please rate your level of agreement with the following statements related to drinking water in your community using a scale from strongly disagree to strongly agree."

	Do not know	Total Disagree (1 and 2)	3-Neither agree nor disagree	2024 Total Agree (4 and 5)	2021 Total Agree (4 and 5)
A. I have access to clean, safe drinking water in my community	5%	20%	13%	62%	54%
B. I trust my water / the source of my water	5%	21%	14%	59%	N/A
C. All members of my community have affordable, equitable access to drinking water	7%	22%	19%	52%	50%
D. My community effectively manages and treats used wastewater or sewage	11%	18%	21%	50%	47%

In total, 62 percent of residents agreed or strongly agreed that they have access to clean, safe drinking water in their community, significantly higher than the 54 percent in 2021. Next highest in terms of agreement was the new Question 14B, where 59 percent said they trust the source of their water. Agreement results were lower for the other two questions that saw no significant change from 2021.

A five-part question asked respondents to rate their level of concern with water removal from the Great Lakes by five methods (**Table 11**). They rated each area using a five-point Likert scale from 1-not at all concerned to 5-very concerned. The chart below combines the one and two responses (not at all concerned and not concerned) and the four and five scores (concerned and very concerned). Question 15E is new to the 2024 poll.

Table 11. Concern over water removal.

Q15. "How concerned are you with the removal of water by each of the following and the impact these water removals have on the quality of water in the Great Lakes."

	Total Unconcerned (1 and 2)	3-Neutral	Total Concerned (4 and 5)	Do not know
A. Private wells	29%	11%	57%	3%
B. Agriculture	11%	7%	81%	1%
C. Industry	8%	7%	85%	<1%
D. Commercial bottled water extraction	13%	9%	77%	1%
E. Golf courses	32%	8%	54%	5%

The greatest concern was with respect to industry at 85 percent (83 percent in 2021), followed by agriculture at 81 percent (75 percent in 2021) and commercial bottled water extraction at 77 percent (69 percent in 2021). Results were lower for private wells at 57 percent (60 percent in 2021) and for the new indicator about golf courses at 54 percent.

In a new question, respondents were asked how much they pay for their monthly water bill (**Table 12**). The results below are presented and were converted to US dollars.

Table 12. Monthly water bill payment amounts.

Q16. "On average, how much do you pay for your household's monthly water bill? If you are unsure, please provide your best estimate."

Nothing	23%
Under $20	10%
$20-$39	16%
$40-$59	14%
$60-$79	6%
$80-$99	16%
$100+	10%
Unsure	7%

In another new set of questions, respondents were asked how much more they would be willing to pay on their monthly water bill to help improve water quality to a safe level across three areas (**Table 13**).

Table 13. How much extra willing to pay to improve water quality for fishing, swimming and drinking.

Q17. "In order to improve water quality to a level that is 'very safe' for the following three categories, would you be willing to pay an additional amount on top of your household's current monthly water bill?"

	No extra	$10	$15	$20	More than $20	Don't know	N/A
A. Fishing	34%	24%	5%	5%	5%	7%	20%
B. Swimming	31%	23%	8%	6%	5%	7%	21%
C. Drinking	21%	24%	9%	11%	12%	5%	18%

A list of options was read starting with the highest price point ($20 or more) and if the respondent said no, they were read the next options ($20, $15 and $10). Responses of none/no extra amount, unsure and not applicable were also accepted. Results indicate residents are most inclined to pay more to improve water quality for drinking water.

5.0 Recreational Activities

The next section and series of questions dealt with usage and importance of the Great Lakes for recreational purposes. Respondents were first asked in the following newly worded question about how they engage with the Great Lakes (**Table 14**). Multiple responses were accepted, and the results below display the percentage of cases or the number of times (expressed in percentage terms) each area was mentioned.

Table 14. Ways the Great Lakes are engaged in recreationally, culturally or otherwise.

Q18. "In what ways do you engage recreationally, culturally or otherwise with the Great Lakes?"

	% of Cases
Walking/hiking	69%
Swimming	64%
With friends/family/pets	49%
Kayaking	47%
Fishing	41%
Boating	36%
Canoeing	36%
Birdwatching	33%
Paddleboarding	20%
Cultural activities	15%
Hunting	12%
Tent camping/RV camping	11%
Foraging	10%
Motorboating	7%
Sailing/windsurfing	5%
Political action	4%
Don't know	3%
Scuba diving/snorkeling	1%
Wild rice harvesting	<1%

A new question in the 2024 poll asks how often respondents look for information about the water quality of the beach they intend to visit before swimming (Question 19, **Table 15**) and then about the sources of their information (Question 20, **Table 16**).

Table 15. How often information is sought about the water quality of the beaches visited.

Q19. "Before swimming at a Great Lakes beach, how often do you look for information about the water quality at the beach you intend to visit?"

Never / do not	26%
Rarely	21%
Sometimes	15%
Most of the time	16%
Always	19%
Don't know	4%

For Question 20 below (**Table 16**), multiple responses were accepted, and the results below display the percentage of cases or the number of times (expressed in percentage terms) each area was mentioned.

Table 16. Resources used to look up the water quality of Great Lakes beaches.

Q20. What resources do you usually use to look up the water quality at Great Lakes beaches?

	% of Cases
Government website	46%
Signage at the beach	48%
None of the above/do not	26%
Google search or reviews	17%
Newspapers, radio, or TV	17%
Social media	11%
Word of mouth	12%
The Swim Guide website or app	5%
Unsure/don't recall	1%

Slightly more than a third always or some of the time look for water quality information before swimming, with the main resources being government websites and beach signage.

In a question asked to all respondents, they were probed about the importance of having the Great Lakes available for leisure or recreational purposes (**Figure 10**). A five-point importance rating scale was used, with the graph below combining the total unimportant (1-not at all important and 2-not important) as well as the total important (4-important and 5-very important) responses.

Q21. "How important is it to you that the Great Lakes are available for leisure or recreational purposes? Please respond using a scale from one not at all important to five very important."

Figure 10. Importance of having the Great Lakes available for leisure and recreational purposes.

Most, or 95 percent, said that it is very important or important to have the Great Lakes available for recreational purposes.

Other new questions in the 2024 poll asked all respondents if their interaction with nature and water in the Great Lakes provides them with benefits in the following four areas (**Table 17**)

Table 17. Interaction with nature and water in the Great Lakes and benefits provided.

Q22. "In your opinion, does interaction with nature and water in the Great Lakes provide benefits in each of the following areas?"

	Yes	No	Don't know
Happiness	95%	2%	3%
Life satisfaction	94%	3%	4%
Mental health	93%	3%	4%
Overall well-being	95%	2%	3%

Interaction with water and nature in the Great Lakes is seen by a very strong majority as providing benefits across the four areas of happiness, life satisfaction, mental health, and overall well-being.

6.0 Information Sources

The following open-ended question is about the sources residents use to get information about the Great Lakes (**Table 18**). The question was re-worded, and in this 2024 poll, multiple responses were accepted. Results below display the percentage of cases or the number of times (expressed in percentage terms) each area was mentioned.

Table 18. Sources of information about the Great Lakes.

Q23. "What are the sources of information you use for information about the Great Lakes?"

	% of Cases
Internet (in general)	37%
Social media	33%
Newspapers (online or print)	33%
Websites (government)	18%
Television	14%
Radio	9%
Don't know	5%
Word of mouth	4%
Environmental organizations	1%
Magazines	<1%

7.0 Responsibility, Governance and Action

7.1 Responsibility for protecting the Great Lakes

Respondents were asked the following semi-open question and were provided a list of potential options about who they felt is responsible for protecting the health and water quality of the Great Lakes (**Table 19**). The question was re-worded, and for this 2024 poll, multiple responses were accepted. Results below display the percentage of cases or the number of times (expressed in percentage terms) each area was mentioned.

Table 19. Who should be responsible for protecting the health and water quality of the Great Lakes basin.

Q24. "Who in your opinion should be responsible for protecting the health and water quality of the Great Lakes basin? Accept multiple responses/check all that apply."

	% of Cases
State/Provincial governments	75%
Federal governments	73%
City/local governments	62%
Everyone/all	24%
Indigenous governments	9%
Industry	7%
Residents/individuals	6%
Nongovernment organizations	3%
Don't know	<1%

Governments at all levels were seen as being most responsible for protecting the health and water quality of the Great Lakes basin.

7.2 Role of the individual

The next question specifically asked about the role of the individual or household in protecting the health and water quality of the Great Lakes (**Figure 11**). It began with a scaled question (1-5) in the perceived importance or role of the individual in this process. The graph below combines the results of very important (5) and important (4) as well as not at all important (1) and not important (2).

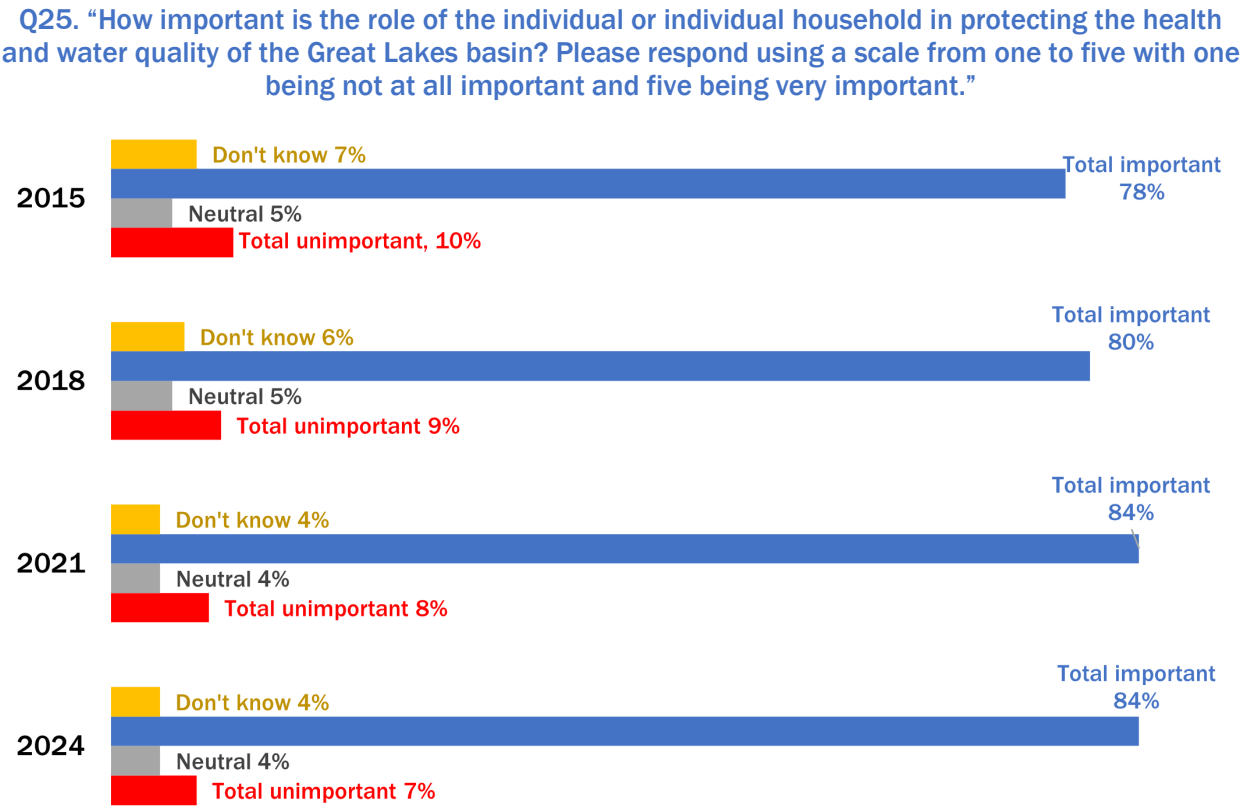

Figure 11. Importance of the role of the individual or household in protecting the health and water quality of the Great Lakes basin.

A large majority of respondents (84 percent), the same as in 2021, feel the role of the individual is important or very important in protecting the health of the Great Lakes basin. Combined total importance was strong and consistent across all lakes and demographic cohorts with no significant differences.

Respondents were read a list of ten actions and asked if they would take part in each of them to help protect the Great Lakes (**Table 20**). Results are compared with 2018 and 2021 findings.

Table 20. Actions likely to take part in to protect the water quality of the Great Lakes.

Q26. "Which of the following actions would you be likely to take part in to help protect the water quality of the Great Lakes?"

ACTIONS LIKELY TO TAKE PART IN	YES 2018	YES 2021	YES 2024
A. Attend a public meeting organized by government or nongovernment organizations	29%	20%	21%
B. Engage in an online forum or group	37%	42%	44%
C. Contact a local elected representative or government official	32%	37%	39%
D. Conserve water at home by using less or installing water efficient fixtures	74%	78%	80%
E. Be aware of or be more careful about what you are disposing down drains	83%	86%	87%
F. Reduce use/disposal of plastics and waste	NA	76%	78%
G. Purchase products that reduce my household water use	NA	64%	61%
H. Join a local watershed group, volunteer your time, or donate money	NA	26%	25%
I. Engage in local water quality sampling	NA	49%	47%
J. Sign a petition	NA	45%	45%

Casual observation reveals that residents of the Great Lakes continue to be most likely to be careful of what they are disposing of down the drain (87 percent), closely followed by conserving water at home (80 percent), reducing their use of plastics and waste (78 percent), and then purchasing products that reduce their water use (61 percent).

Findings were lowest for engaging in local water sampling, an online forum, signing a petition and especially for joining a watershed group, volunteering time, or donating money and attending a public meeting.

In a new set of four questions, respondents were asked to rate their level of agreement with four statements related to their local municipality and water protection (**Table 21**). A five-point rating scale was used, and the table below combines the total disagree (1-strongly disagree and 2-disagree) as well as the total agree (4-agree and 5-strongly agree) responses.

Table 21. Agreement statements related to local municipalities and water protection.

Q27. "Please rate your level of agreement with the following statements."

	Total Disagree (1 and 2)	3-Neither agree nor disagree	Total Agree (4 and 5)	Don't know
A. My municipality takes its responsibility to protect the Great Lakes seriously	16%	27%	42%	15%
B. Sustainability related to water and the Great Lakes is included in planning and environmental protection efforts in my municipality	18%	23%	37%	22%
C. My municipality has an active agenda related to the health of the Great Lakes	25%	21%	28%	26%
D. My municipality is taking action to protect water quality	17%	23%	42%	18%

Overall, results were mixed with agreement levels being modest and lowest for municipalities having active agendas related to the health of the Great Lakes (28 percent agreement). A high number were unsure or held a neutral opinion across the four areas.

7.3 Government responsibilities

Respondents were asked their opinion on having greater protection and its perceived impact on jobs and the economy (**Table 22**).

Table 22. Impact of having greater protection of the Great Lakes through regulations and enforcement.

Q28. "In your opinion, would having greater protection of the Great Lakes through regulations and their enforcement have a positive impact, negative impact, or no impact on jobs and the economy?"

	2018	2021	2024
Positive	23%	21%	29%
Negative	27%	29%	26%
No impact	30%	32%	30%
Don't know	20%	17%	16%

Eight percent more in 2024 answered that greater protection would have a positive impact compared to 2021, three percent fewer a negative impact and two percent fewer no impact.

A new question about the importance of governments investing to protect the Great Lakes was next asked (**Figure 12**), where most or 96 percent responded it is important or very important.

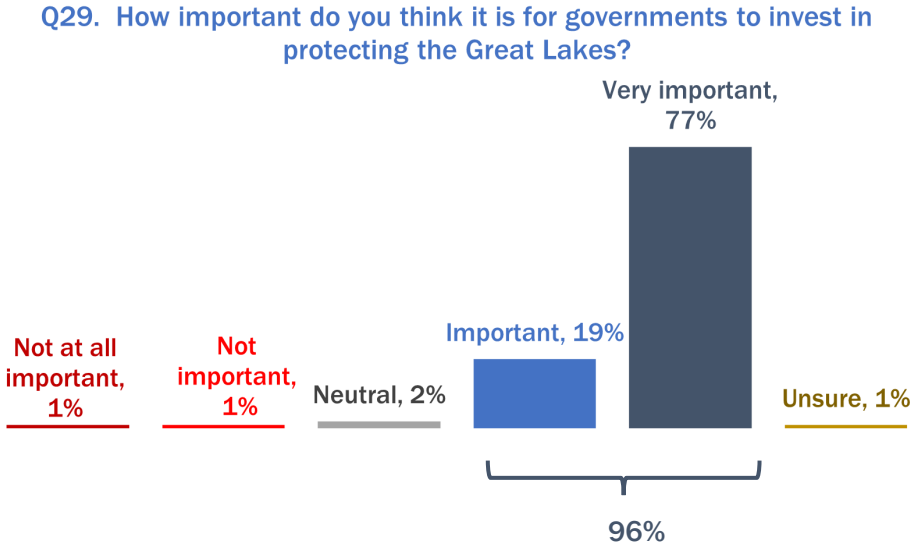

Figure 12. Importance of governments investing to protect the Great Lakes.

8.0 International Joint Commission

A question first asked in 2015 about awareness of the International Joint Commission (IJC) was asked (**Figure 13**) revealing moderate growth in awareness.

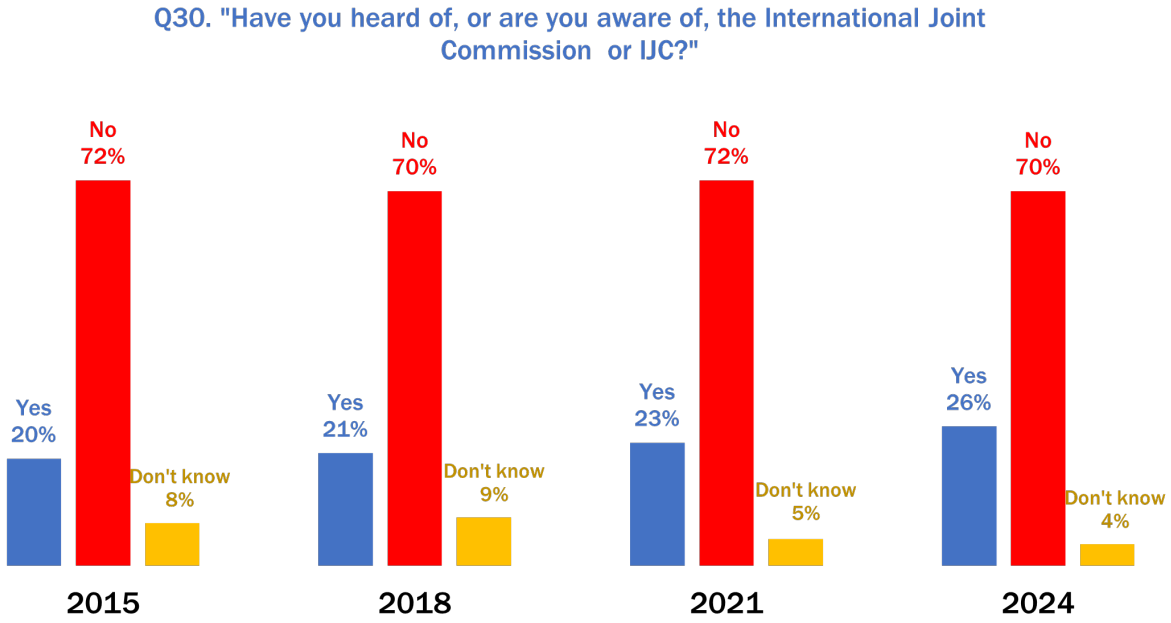

Figure 13. Awareness of the International Joint Commission (IJC).

9.0 Value Statements

All respondents were asked to rate their level of agreement on a scale from one strongly disagree to five strongly agree with eight value statements related to the Great Lakes (**Table 23**). Results in this table combine the total agree results of strongly agree (5) and agree (4). Question 31A, 31B, 31C and 31D are questions that were baseline, while Question 31E is new to the 2024 phone poll.

Table 23. Agreement value statements.

Q31. "Please rate your level of agreement with each of the following statements."

	2015	2018	2021	2024
A. Actions should be taken now to ensure the health and water quality of the Great Lakes for future generations	73%	77%	80%	81%
B. The Great Lakes water quality should be protected for the benefit of people living in the Great Lakes Basin	68%	72%	76%	78%
C. The Great Lakes water quality should be protected for the benefit of fish and wildlife	76%	79%	83%	85%
D. The economy of the region will suffer if the Great Lakes are not healthy	76%	78%	78%	80%
E. I feel hopeful about the future of water quality in the Great Lakes	N/A	N/A	N/A	60%

While there were no year over significant changes, the strongest level of agreement at 85 percent (+2 percent higher than 2021) related to the need to protect the Great Lakes for the benefit of fish and wildlife. This was followed by the statement that actions need to be taken to ensure the health and water quality of the Lakes for future generations at eight in ten (unchanged) and that the economy of the region will suffer if the lakes are not healthy, also at 80 percent (+2 percent from 2021). Results were slightly increased at 78 percent (+2 percent from 2021) for the indicator related to protecting the Great Lakes for the benefit of people. With respect to the new question about being hopeful for the future of water quality, six in ten agreed.

10.0 First Nations, Métis and Tribal Nations Member Responses

First Nations, Métis and Tribal Nation member respondent breakdown by Canadian and US respondents are highlighted in **Table 24** below.

Table 24. Identification as Indigenous (First Nations-Canada, Native American/Tribal Nation-United States) or Métis (Canada).

Q32. "Do you identify as Indigenous, (First Nations-Canada) (Native American/Tribal Nation-United States) or Métis (Canada)?"

	N	%	
Native American/Tribal Nation-US	N=266	6%	ASKED Q33
First Nations-Canada	N=195	4%	ASKED Q33
Métis-Canada	N=39	1%	PROCEEDED TO Q35
No / none	N=4050	89%	PROCEEDED TO Q39

There were 461 individuals (10 percent) that self-identified as First Nations (Canada) or Native American/Tribal Nations (United States); these individuals were also asked to name the First Nation, Tribe or community they are members of or identify with (Question 33, **Table 25**) and then if they live on or off reserve (Question 34, **Table 26**).

Table 25. The name of respondents' Tribe/Nation/Indigenous community.

Mohawks of the Bay of Quinte	N=66
Prefer not to answer	N=52
Métis	N=39
Six Nations	N=26
Wiikwemkong	N=24
Potawatomi	N=22
Thunder Mountain	N=20
Pokagon Band of Potawatomi	N=20
Cattaraugus	N=16
Little Traverse Bay Bands of Odawa Indians	N=14
Oneida Nation	N=11
Allegany	N=11
Miami Nations of Indians of the State of Indiana	N=11
Saugeen	N=10
Little River Band of Ottawa Indians	N=10
Lower Sioux Indian Community	N=9
Lac Courte Oreilles	N=9
Bay Mills Indian Community	N=9
The Bad River Reservation	N=8
White Earth Ojibwe	N=8
Nottawaseppi Huron Band of the Potawatomi	N=7
Alderville First Nation	N=7
Shakopee Mdewakanton Sioux	N=6
Shawnee Nation	N=6
Shinnecock Indian Nation	N=6
Red Rock	N=6
Leech Lake Reservation	N=6
Mille Lacs Band of Ojibwe	N=5
Biigtigong Nishnaabeg	N=5
Match-E-Be-Nash-She-Wish Band / Gun Lake	N=4
Lac du Flambeau Tribe	N=4
Sault Tribe of Chippewa Indians	N=4
Hannahville Indian Community	N=3
Tonawanda	N=3
L'Anse Indian Reservation	N=3
Sokaogon Chippewa Community	N=3
Grand Traverse Band of Ottawa and Chippewa Indians	N=3
M'Chigeeng First Nation	N=3
Aundeck Omni Kaning	N=3
Tuscarora people	N=2
Martin Falls	N=2
Nipissing First Nation	N=2
Ho-Chunk Nation	N=1
Lac Vieux Desert Band of Chippewa Indians	N=1
Red Lake Nation	N=1
Mishkeegogamang	N=1
Lac des Mille Lacs 22A1	N=1
Dokis First Nation	N=1
Whitesand First Nation	N=1
Michipicoten	N=1
Fort William	N=1
Wahnapitae	N=1
Henvey Inlet First Nation	N=1
Ho-Chunk Nation	N=1

Table 26. Respondents living on or off Reserve.

Q34. "Do you live on or off Reserve?"

	Percent
On reserve	57%
Off reserve	43%

Next, all 500 (11 percent) that identified as First Nations, Tribal Nations members and including Métis, were asked if any of the ways they engage with the lakes are threated (Question 35, **Figure 14**).

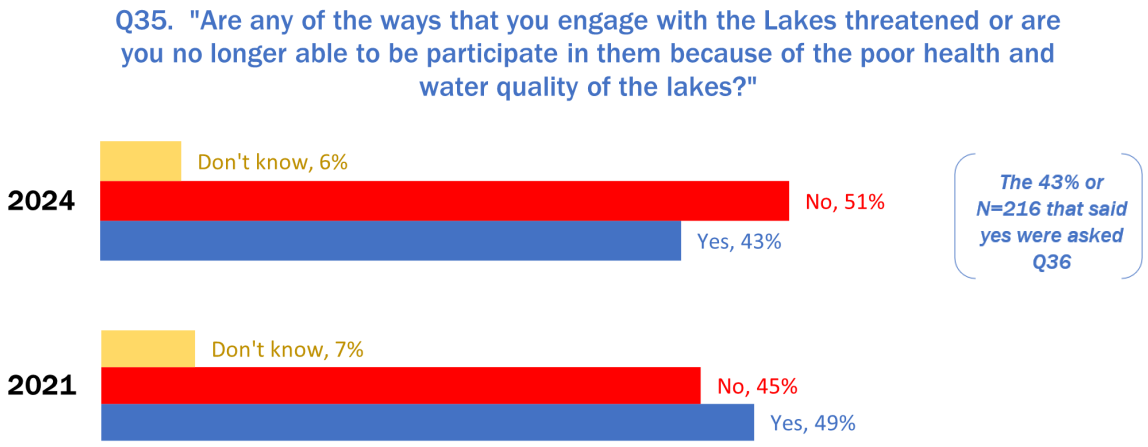

Figure 14. Is poor health and water quality of the lakes affecting the ways that the lakes are engaged with or participated in.

The 43 percent or 216 respondents who said yes in Question 35 were asked in an open-ended probe allowing for one response to comment about the threat (**Table 27**).

Table 27. Comments about the threats affecting health and water quality of the lakes.

Q36. "Please provide comments about these threats."	
Fish and wildlife contamination	N=29
Industry/mining sectors	N=29
Invasive species (plants, fish, mussels)	N=28
Swimming	N=27
Drinking/ingesting	N=25
Poor water quality	N=18
Wild rice harvesting	N=15
Decreasing/low water levels	N=13
PFAS/microplastics	N=10
Recreational activities	N=7
Contaminated water	N=7
Pollution/chemicals	N=6
Ceremonial activities	N=2

The final question in this section all 500 respondents that identified as First Nations, Tribal Nations members and including Métis were asked about concerns over fish, plant or wildlife species of cultural importance (**Figure 15**).

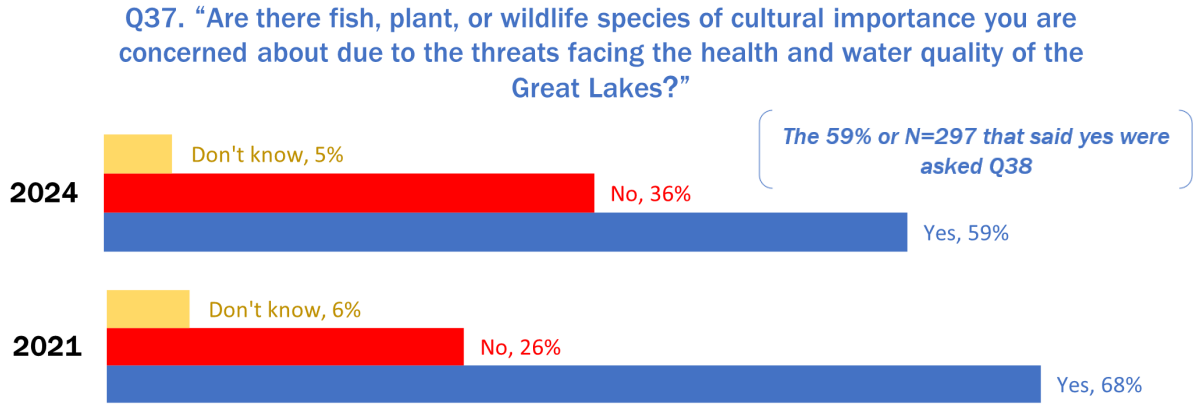

Figure 15. Is the health and water quality of the lakes causing concern over fish or wildlife species of cultural importance.

The 59 percent or 297 respondents that said yes in Question 37 were asked in an open-ended probe allowing for one response to comment about the threat (**Table 28**).

Table 28. Comments about concern over fish or wildlife species of cultural importance.

Q38. "Please provide comments about these threats."

Wild rice harvesting	N=33
Invasive species (plants, fish, mussels)	N=32
Fish habitat	N=31
Financial impact	N=31
PFAS/microplastics/toxins	N=31
Industry practices/accountability	N=29
Lack of enforcement from regulatory bodies	N=27
Protection of lakes	N=23
Extirpation/extinction/endangered species	N=22
Wildlife	N=12
No comment	N=10
Pollution/contaminants	N=7
Safe consumption of fish	N=5
More research needed	N=1
Indigenous culture	N=1
Flora	N=1

11.0 Evaluating Statements About the Future of the Great Lakes

In a question new to the 2024 poll, all respondents were asked a new set of questions where they rated their level of agreement on a scale from one strongly disagree to five strongly agree with seven statements related to the future of the Great Lakes. Results in **Table 29** below combine the total agree results of strongly agree (5) and agree (4).

Table 29. Future of the Great Lakes agreement statements.

Q39. "Finally, I would like you to think ahead to 2040 and the Great Lakes basin. Please rate your level of agreement with each of the following statements using a scale from strongly disagree to strongly agree."

	% Total Agree
A. In 2040, the Great Lakes region is a sustainable region	36%
B. In 2040, the Great Lakes region has an increasing population and water uses/demands	83%
C. In 2040, the Great Lakes region is a center of economic investment and prosperity	44%
D. In 2040, the Great Lakes region is a global example of how to protect and restore shared waters	32%
E. In 2040, the Great Lakes region is a region with conflict over water	70%
F. In 2040, the Great Lakes region is becoming more polluted and degraded	65%
G. In 2040, the Great Lakes region is being protected by our governments	32%

Agreement was significantly higher for the Great Lakes basin in 2040 having an increasing population and water uses/demands, will be a region with conflict over water and will become more polluted and degraded.

12.0 Demographics

D1. “Which of the following age groups may I place you in?”

18-34	33%
35-44	18%
45-54	21%
55-64	10%
65-74	13%
75 and older	4%
Refused	<1%

D2. “What is the highest level of education that you have completed?”

Some high school or less	7%
Graduated high school	17%
Some post-secondary (college, university)	25%
Graduated university/college	46%
Refused	6%

D3. “Do you consider yourself to be politically conservative, liberal, moderate, or are you apolitical/non-political?”

Conservative	30%
Liberal/progressive	33%
Moderate	28%
Apolitical/nonpolitical	4%
Don't know	6%

D4. “People come from many different ethnic, cultural, and racial backgrounds in the Great Lakes region. What is your self-identified race or ethnicity?”

White/Caucasian/European origin	61%
Black/African American or Canadian/African	10%
Hispanic/Latinx	4%
South/SE Asian (India, Pakistan)	2%
East Asian (China, Japan, Vietnam)	3%
Middle Eastern/North African	4%
Indigenous/Métis	11%
Refused	5%

D5. “What gender do you currently identify as?”

Male	48%
Female	48%
Other	3%
Refused	<1%

D6. “What is your combined family income?”

Less than $50,000	31%
$50,000 to $74,999	20%
$75,000 to $99,999	12%
$100,000 or more	17%
Refused	21%

13.0 Summary

Residents have mixed views on the water quality of the Great Lake they are closest to. Thirty-seven percent answered that the quality was good or very good and 33 percent poor or very poor, while 20 percent were neutral (neither poor nor good) and 11 percent did not know. In the previous 2021 poll when asked to rate the health and quality of the Lake they said they were most connected with, 29 percent answered good or very good and 33 percent poor or very poor. Residents of, the Lake Erie (39 percent), Michigan (34 percent), and Ontario (34 percent) basins were significantly more likely to provide poor or very poor ratings, while those near Superior and Huron tended to rate their lakes as good or very good (76 percent and 75 percent respectively).

When asked about where the trend of the water quality of the lake they live closest to is headed, results were for the most part consistent with previous years. There were more in this wave (34 percent) saying things are deteriorating compared to 2021 (+4 percent) while slightly more also answered improving (+2 percent). Results were also significantly higher for deterioration among those from Lake Erie (39 percent), while more residents living in the watersheds of Lake Huron (50 percent) and Superior (45 percent) tended to say not changing. The youngest aged 18-34 most named deteriorating (40 percent) and the oldest 75+ not changing (46 percent).

The greatest challenge related to the water quality of the lake respondents are most connected with are invasive species, while industrial pollution as well as pollution in general were next most referenced. Other top challenges are related to runoff from municipalities, algae, water levels, agricultural pollution, climate change and waste/garbage. Algae remains the biggest concern among Lake Erie residents (19 percent) and invasive species for those near Lake Huron (25 percent).

A low percentage of residents feel it is safe or very safe to drink water (32 percent) and eat fish (33 percent) from the lake closest to them, while results were higher with respect to swimming (47 percent). Indigenous/Métis respondents were more likely to answer not safe or not at all safe for drinking water (44 percent), eating fish (43) and swimming (37). Overall positive safety scores for the three areas were significantly higher among those living near Lakes Superior and Huron, while unsafe results were elevated for Michigan, Ontario and especially Erie.

There is continued upward increase (+4 percent over 2021) in the percentage of residents that feel it is important or very important, at 94 percent, that the health and water quality of the Great Lakes basin be protected. Combined importance results were high across demographic and geographic indicators.

When respondents were asked to rate their concern over a series of aided areas, results reinforce concerns raised in the unaided probe over runoff, algae and invasive species, in addition to concerns over climate change and its impact on wetlands and flooding. The highest rated in terms of a negative impact were algae blooms and plastics (88 percent each) followed by municipal runoff (86 percent), invasive species (86 percent) and farm runoff (81 percent).

Concerns over climate were also expressed when respondents were specifically asked to rate their level of concern that climate change will have on water quality (significantly highest at 83

percent concerned), water quantity (77 percent concerned) and community well-being (81 percent concerned). In addition, a nine in ten majority feel that climate change will put more pressure on the Great Lakes.

When asked to rate the overall health of the Great Lakes using a scale of poor, fair or good, results reveal a three-way split of opinion with three in ten saying poor, one-third good and 34 percent fair, while 2 percent were unsure.

On the topic of understanding of issues related to the state of the Great Lakes (e.g. water quality at beaches, fish consumption, invasive species, climate, etc.), results reveal a low level of overall (good) understanding. On a series of questions related to the quality of drinking water in their community, results were tepid. Sixty-two percent agreed or strongly agreed that they have access to clean, safe drinking water in their community (only 35 percent of Indigenous/Métis respondents), 59 percent said they trust the source of their water (34 percent of Indigenous/Métis respondents), 52 percent agreed that all members of their community have affordable, equitable access to drinking water (a low 30 percent of Indigenous/Métis respondents) and 50 percent agreed their community effectively manages and treats wastewater or sewage (only 28 percent of Indigenous/Métis respondents).

Water removal from the Great Lakes was also an area of concern, especially as it related to industry at 85 percent, agriculture at 81 percent and commercial bottled water extraction at 77 percent.

When respondents were asked how much more they would be willing to pay on their monthly water bill to help improve water quality to a safe level across three areas, improving the quality of drinking water most resonated, compared to other areas such as fishing and swimming.

Walking or hiking and swimming were the most named recreational activities respondents use the Great Lakes for and most, or 95 percent, of survey participants said that it is very important or important to them to have the Great Lakes available for recreational purposes.

Interaction with water and nature in the Great Lakes is seen by a very strong majority (more than nine in ten for each across all cohorts) as providing benefits across the four areas of happiness, life satisfaction, mental health, and overall well-being.

The most named sources residents use to get information about the Great Lakes were internet websites in general, social media and online or print versions of newspapers.

While governments at all levels were seen as being most responsible for protecting the health and water quality of the Great Lakes basin, a large majority (84 percent) feel the role of the individual is also important or very important in protecting the health of the Great Lakes basin. Residents are also likely to take actions to help protect the Great Lakes. This includes being careful of what they are disposing of down the drain (87 percent), closely followed by conserving water at home (80 percent), reducing their use of plastics and waste (78 percent), and purchasing products that reduce their water use (61 percent).

Despite the belief that governments are responsible for protecting the health and water quality of the basin, and that 96 percent are of the opinion that it is important for governments to invest in

protecting the Great Lakes, only 28 percent agreed that municipalities have active agendas related to the health of the Great Lakes.

When respondents were asked their opinion on having greater protection and its perceived impact on jobs and the economy, only 26 percent answered negative impact, 29 percent positive impact, while most said no impact (30 percent) or were unsure (16 percent).

IJC awareness continues to slightly improve, though hovers at only one quarter of the survey sample. A total of 26 percent of respondents have heard of or were aware of the International Joint Commission, an increase of three percent over 2021.

The importance of the Great Lakes to residents was also reinforced when residents were asked to rate their level of agreement with a series of statements. The strongest level of agreement at 85 percent (+2 percent higher than 2021) related to the need to protect the Great Lakes for the benefit of fish and wildlife. This was followed by the statement that actions need to be taken to ensure the health and water quality of the Lakes for future generations at eight in ten (unchanged) and that the economy of the region will suffer if the Lakes are not healthy also at 80 percent (+2 percent). Results were similar and also slightly improved at 78 percent for indicator related to protecting the Great Lakes for the benefit of people. However, six in ten (in a new question) agreed that they are hopeful for the future of water quality.

Future concerns over the Great Lakes were most evident as it relates to increasing population and water demands (83 percent), that it will be a region with water conflicts (70 percent) and is becoming more polluted (65 percent). Indigenous/Métis respondents also expressed concerns over fish, plant, or wildlife species of cultural importance and that ways they engage with the lakes are threatened.

Overall, there is strong buy-in over the importance of the Great Lakes and the need to protect the basin. There also continues to be an ongoing concern about its future health. Residents are clearly aware of threats to the lakes such as climate change and its impacts, and threats ranging from invasive species to pollution and algae, but they need more information.

The role of government is seen as being important, but results indicate that governments are perceived to be falling short. Individuals also want to play a role and are willing to take action, however, findings reveal that more work needs to improve understanding of key areas that are impacting the health of water quality.