



# Online Poll Final Report

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

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Prepared for the International Joint Commission Great Lakes Water Quality Board  
by Oraclepoll Research (contractor)



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## List of Acronyms

GLWQA	Great Lakes Water Quality Agreement
IJC	International Joint Commission
WQB	Great Lakes Water Quality Board

# 1. Methodology and Logistics

## 1.1 Background and overview

In 2015, Oraclepoll conducted the first baseline Great Lakes basin randomized 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 to that random telephone poll.<sup>1</sup>

This report contains the findings of an open-online (not random) poll conducted between July and August 2021. When and where possible, findings are compared with the WQB's 2021 telephone poll results.

All respondents completed the poll online using computer-assisted web interviewing methods. This was an open-online self-selection survey where participants could connect with the survey link to complete their interview. This online poll of 4,674 respondents provides additional information to consider in conjunction with the 2021 randomized telephone poll.

## 1.2 Design

Oraclepoll designed the online poll instrument in consultation with the WQB engagement work group. Some key questions remain consistent with the 2021 telephone poll questions, others have been modified, and added several new questions.

## 1.3 Survey method

Oraclepoll conducted the poll by developing a web-based questionnaire that was embedded into a WQB webpage. Oraclepoll promoted the poll to target audiences via the IJC social media platforms and other target marketing channels. IJC staff and WQB work group members also promoted the poll through their own resources and networks, and focused garnering participation from several agreed-upon priority geographic and demographic cohorts that were not highly sampled in the telephone poll, such as individuals identifying with Lake Superior and students/youth.

Therefore, this online poll is considered anecdotal because it was not a random sample poll of the general public, was open to any participant, and was promoted more heavily in some

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<sup>1</sup> The 2021 phone poll results report is available on the Great Lakes Water Quality Board website at: [ijc.org/sites/default/files/WQB\\_GreatLakesRegionalPoll\\_TelephonePollReport\\_2021.pdf](http://ijc.org/sites/default/files/WQB_GreatLakesRegionalPoll_TelephonePollReport_2021.pdf).

geographies than others. Therefore, there are also demographic differences in respondents between this online poll and the randomized telephone poll. For example, only 9 percent of respondents to this online poll defined themselves as politically conservative, compared to 29 percent in the random 2021 telephone poll. Online respondents also tended to be more liberal/progressive (46 percent) in relation to those from the telephone survey (33 percent).

## **1.4 Logistics**

Respondents could complete the online poll between July 20 and August 27, 2021.

## **1.5 Study sample and error rates**

In total, 4,674 respondents completed the online poll. However, the online survey allowed respondents to skip and refuse certain questions, and as a result not all respondents answered all questions. There were no respondent quotas for state and provincial jurisdictions or other demographic cohorts. It was possible for individuals living outside of the Great Lakes basin to complete the poll.

It is not acceptable to assign online self-selection nonprobability samples a margin of error. However, a probability sample of 4,674 can be considered accurate  $\pm 1.5$  percent, 19 out of 20 times.

## **1.6 Reporting notes**

This report contains the findings of the poll in the order that questions were asked. When and where possible, data from this anecdotal, nonrandom poll is referenced and compared to the randomized 2021 telephone survey. Oraclepoll also provided the WQB with complete results and crosstabulations.

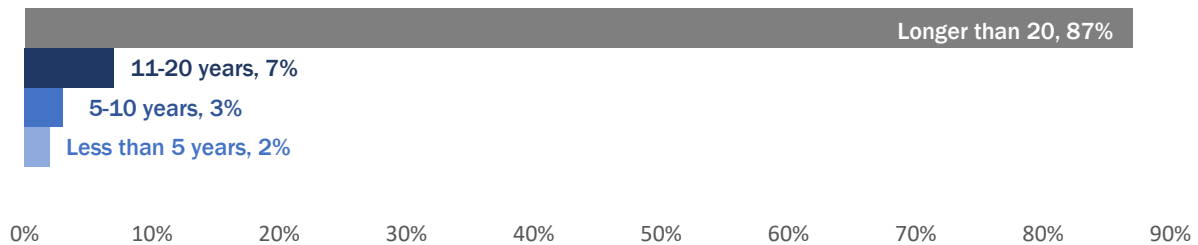
Some numbers displayed in charts and graphs may not add up to 100 percent as a result of rounding.

## 2. Opening Questions

### 2.1 Introductory questions

The first set of introductory questions asked all respondents how long they lived in the Great Lakes region (**Figure 1**).<sup>1</sup> Most or almost nine in ten online respondents are long term residents living in the area for 20 or more years.

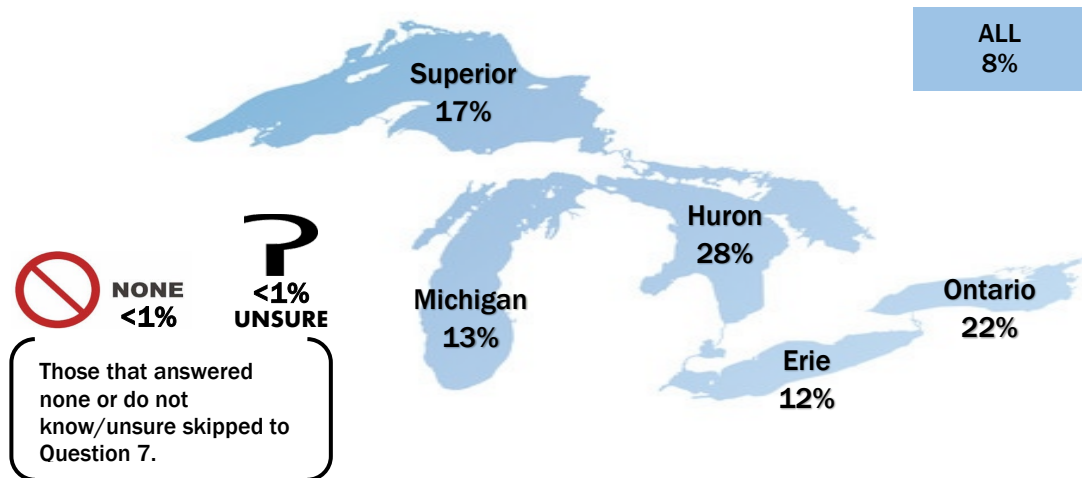
#### Q1. How long have you lived in the Great Lakes region?



**Figure 1:** Length of time respondents lived in the Great Lakes region.

Respondents were then asked what Great Lake (or body of water) they have the greatest connection with (**Figure 2**).<sup>2</sup> The online poll added an “all” answer option.

#### Q2. With which Great Lake (or water body) do you have the greatest connection?



**Figure 2:** The Great Lake (or body of water) respondents have the greatest connection to.

<sup>1</sup> Corresponds to Q1 in the 2021 phone poll, but response categories differ.

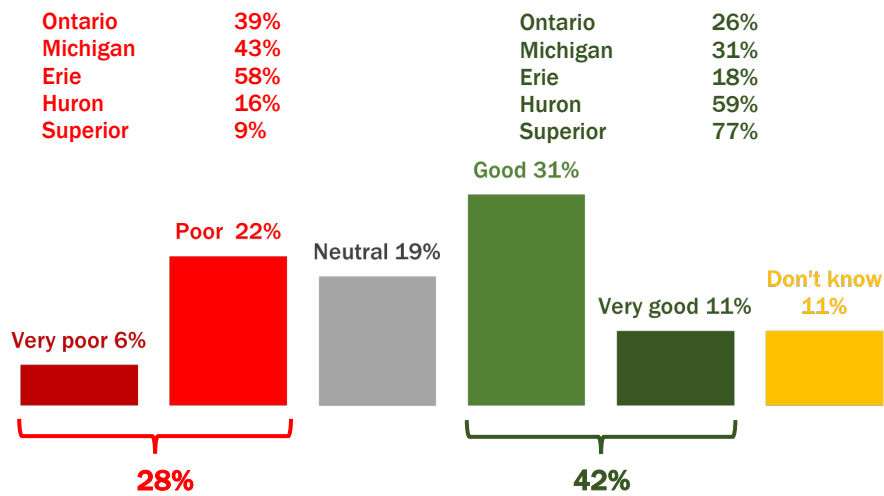
<sup>2</sup> Corresponds to Q2 in the 2021 phone poll.



## 2.2 Status and direction of environmental health

Next, respondents were asked to rate the health and quality of the lake they said they were most connected with in Question 2 (**Figure 3**).<sup>3</sup> Twenty-eight percent rated the health of the lake as poor or very poor (33 percent in the 2021 phone poll) and 42 percent as good or very good (29 percent in the phone poll) and 19 percent had a midpoint neutral opinion (18 percent in the phone poll). The number of those unsure is 11 percent, down from the 19 percent in the phone poll.

### Q3. How would you rate the current status of the environmental health and water quality of the lake you have the greatest connection with using a scale from one very poor to five very good?

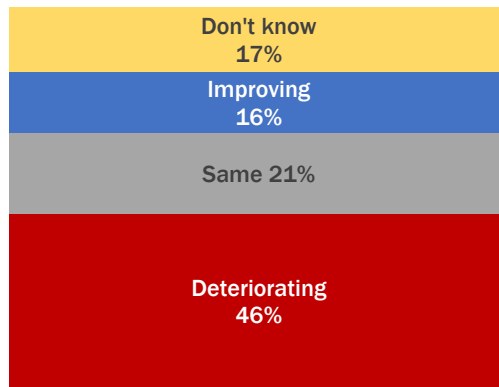


**Figure 3:** Combined rating of the status of the environmental health and water quality of the lake respondents identified in Question 2, and rating by lake.

<sup>3</sup> Corresponds to Q3 in the 2021 phone poll.

Residents that named a lake in Question 2 were asked about the trend of the environmental health and water quality of that lake (**Figure 4**).<sup>4</sup> A higher number or 46 percent compared to the phone poll (30 percent) feel things are deteriorating, only 16 percent improving (18 percent in the phone poll) and 21 percent remaining about the same (33 percent in the phone poll). Seventeen percent were unsure (19 percent in the phone poll).

**Q4. In your opinion, is the trend of the environmental health and water quality of this lake improving, deteriorating or not changing?**



**Figure 4:** Combined rating of the trend of the environmental health and water quality of the lake respondents identified in Question 2.

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<sup>4</sup> Corresponds to Q4 in the 2021 phone poll.

Respondents that named a lake in Question 2 were next asked in an open or unaided question to identify what they believed was the most significant problem facing that lake (**Table 1**).<sup>5</sup>

**Table 1:** Most significant problem or challenge facing the lake respondents previously identified.

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

TOPIC NAMED	%
Don't know	12%
Invasive species (plants, fish, mussels)	12%
Pollution (in general)	10%
Rising temperatures/climate change	9%
Drainage/municipal runoff/(septic) waste treatment plants	8%
Agricultural pollution/waste/runoff/eutrophication	7%
Industrial pollution (toxins, chemicals)	6%
Algae/green algae/blooms	6%
Development (housing, industry, human encroachment)	5%
Water levels/fluctuations	4%
Plastics	3%
Waste being dumped into the lakes	3%
Erosion/loss of wetlands, etc.	3%
Oil industry/spills/oil pipelines/mining	2%
Shipping/marine vessels	2%
Dams/hydroelectric plants/PSPs/nuclear	2%
Water quality	1%
Water removal/diversion	1%
Government policy/lack of	1%
Endangered species/fishing depleted in the lakes	1%
Tourism/overuse	1%
Lack of regulations	1%
E. coli/bacteria	1%
Fertilizers/pesticides	1%
Lack of public awareness/education	<1%
Mercury levels	<1%
Acid rain/air pollutants from industry/emissions	<1%
Fracking	<1%

Overall results reveal consistent themes with the random phone poll. When grouping together responses, pollution was referenced by 39 percent of respondents (phone poll 41 percent) including industrial pollution, pollution (in general), municipal runoff, agricultural runoff, waste dumped, petroleum spills and plastics. The top single mention by 12 percent as in the phone poll (18 percent) related to invasive species, followed by climate change concerns by 9 percent (phone poll 3 percent), algae at 6 percent (phone poll 8 percent), development at 5 percent (phone poll 2 percent), and water levels at 4 percent (phone poll 6 percent).

<sup>5</sup> Corresponds to Q5 in the 2021 phone poll.

# 3. Water Quality Concerns and Issues

## 3.1 Safety of the water

Residents that named a lake in Question 2 were asked rated how safe it is to swim, drink water and eat fish from the Great Lake that they have the greatest connection with (Figure 5).<sup>1</sup>

Q6. Please rate how safe you think it is to do each of the following in the lake you have the greatest connection with?

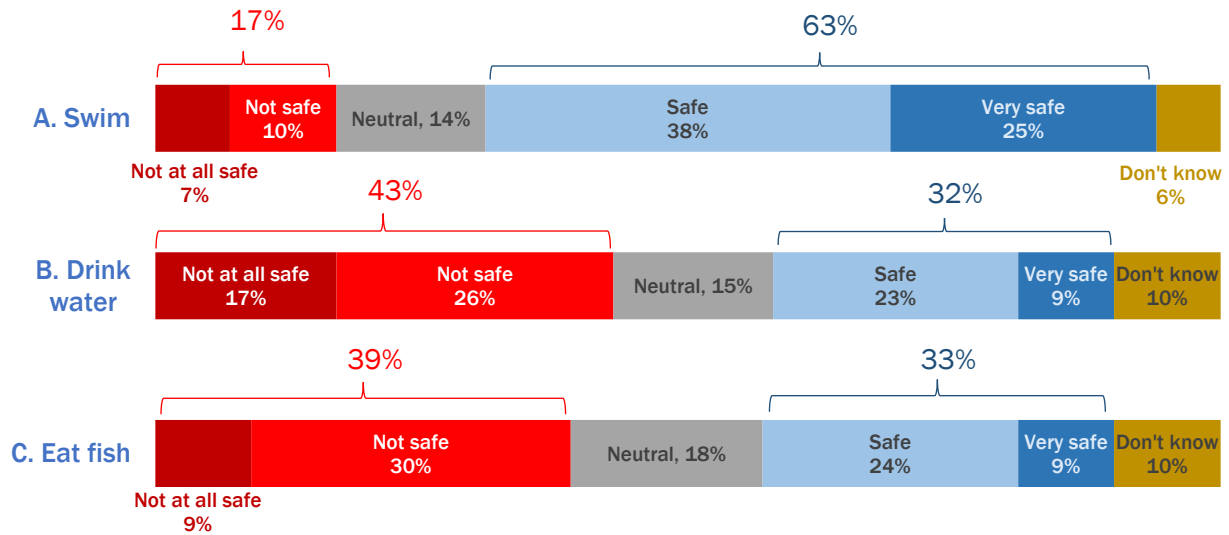


Figure 5: Combined ratings for the lake respondents previously identified, of the perceived safety to swim in the lake, drink (treated) water sourced from the lake and eat fish from the lake.

Concerns over safety, as evidenced by responses of not safe and not at all safe, were highest for drinking water from the Great Lake with the greatest connection to them at 43 percent (phone poll 36 percent), 32 percent consider it safe or very safe (phone poll 17 percent), while 15 percent had a neutral opinion (phone poll 29 percent) and ten percent were unsure (phone poll 17 percent). Of next highest concern was eating fish at 39 percent (phone poll 38 percent), one third consider it safe or very safe (phone poll 18 percent), 18 percent had a neutral view (phone poll 28 percent) and 10 percent did not know (phone poll 18 percent). Swimming was the activity respondents felt safest doing at 63 percent as it was with the phone sample (40 percent), 17 percent said they felt unsafe (phone poll 30 percent), 14 percent had a neutral opinion (phone poll 40 percent), and 6 percent were unsure (phone poll 16 percent).

<sup>1</sup> Q6a corresponds to Q6 in the 2021 phone poll, Q6b corresponds to Q7 in the 2021 phone poll, and Q6c corresponds to Q8 in the 2021 phone poll.

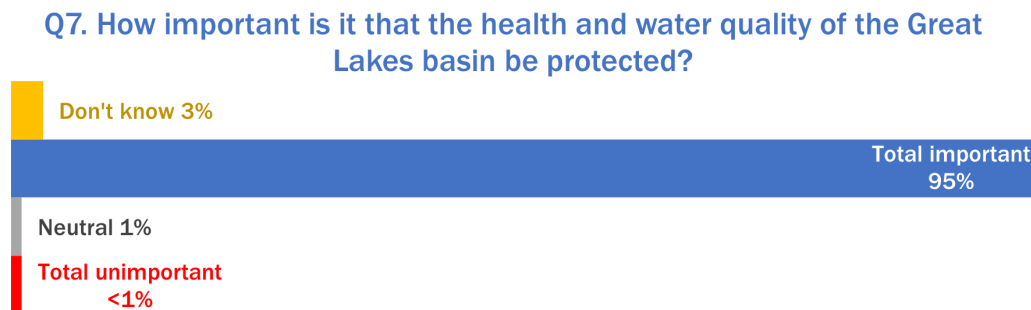
# 4. Watershed Protection, Governance and Action

Prior to asking questions in this section, respondents were prompted to read the following preamble.

*“The Great Lakes basin consists of the Great Lakes and the area of land and water that surrounds the lakes, and feeds into them from Indigenous territories, the states of Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania and Wisconsin in the United States, and the province of Ontario in Canada.”*

## 4.1 Importance

Respondents were then asked to rate the importance of protecting the health and water quality of the Great Lakes basin (Figure 6).<sup>1</sup>



**Figure 6:** Respondents rating of the importance of protecting the health and water quality of the Great Lakes basin.

Ninety-five percent of those responding to the online poll answered that it is important (8 percent) or very important (87 percent) that the health and water quality of the Great Lakes be protected. This is similar, but slightly higher than, the phone poll (90 percent rated as important).

<sup>1</sup> Corresponds to Q10 in the 2021 phone poll.

## 4.2 Threats: top of mind

In an open-ended or unaided question, residents were asked to name anything they felt would pose a threat to the waters that feed into the Great Lakes (**Table 2**).<sup>2</sup> Multiple responses were allowed from respondents.

**Table 2:** Topics respondents identified as posing a threat to the Great Lakes or tributaries.

### Q8. Can you name anything you feel may pose a threat to the lakes or waters that feed into the Great Lakes?

TOPIC NAMED	%	TOPIC NAMED (continued)	%
Invasive species (Zebra mussels, Asian carp)	14%	Plastics	2%
Climate change/rising temperatures/extreme weather	12%	Algae/green algae	1%
Do not know	11%	Water levels/fluctuations	1%
Pollution (in general)	8%	Garbage/waste/dumping	1%
Water being removed/diversion	7%	Commercial vessels/shipping	1%
Oil industry/spills/pipelines/mining	6%	Erosion/loss of wetlands	1%
Municipal runoff/waste runoff/sewage	5%	Traffic on the water (boating)	<1%
Industrial pollution/waste	5%	Tourism/recreational activities (overuse)	<1%
Agricultural pollution/waste/runoff/ eutrophication	5%	Lack of public awareness/education	<1%
People/human populations (in general)	3%	Fish farms/aquaculture	<1%
Population growth/urban sprawl/housing developments	3%	Not enough conservation/attitude of people	<1%
Chemical pollution	3%	Too many regulations/activists/agendas	<1%
Development/shoreline development/overdevelopment	3%	Overfishing/illegal fishing/sport fishing	<1%
Pesticides/fertilizers	2%	Winter road salt	<1%
Government policy/lack of	2%	Mercury levels	<1%
Dams/hydroelectric plants/PSPs/nuclear/turbines	2%	Fracking	<1%
Lack of regulations/laws	2%		

Invasive species was the most named issue in the online (14 percent) as well as the phone poll (15 percent), while in this digital forum climate related issues followed closely at 12 percent (phone poll 3 percent) and then water diversion or the commercial removal of water at 7 percent (phone poll 5 percent). Issues related to pollution totaled 35 percent of responses (phone poll 46 percent).

<sup>2</sup> Corresponds to Q11 in the 2021 phone poll.

### 4.3 Impact on health and quality of the Great Lakes

Respondents then rated the impact of factors that may have on the environmental, health and water quality of the Great Lakes (Table 3).<sup>3</sup> They were asked to rate each area using a five-point Likert scale from 1-no negative impact at all to 5-very negative impact. The chart below combines the no negative impact at all and no negative impact (1 and 2) and the negative impact and very negative impact (4 and 5).

**Table 3:** Respondents’ ratings of the impact of 13 issues on the environmental health and water quality of the Great Lakes.

**Q9. 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? Please use a scale from one, no negative impact at all to five, a very negative impact.**

	Do not know	1-No negative impact at all; and 2-No negative impact	3-Neutral	4-Negative impact; and 5-Very negative impact
A. Climate change/global warming	2%	3%	9%	86%
B. Flooding/water levels	3%	3%	20%	73%
C. Nuclear waste	16%	11%	17%	56%
D. Loss of wetlands	3%	2%	4%	91%
E. Farm runoff including manure, animal waste and fertilizers	1%	1%	3%	93%
F. Municipal wastewater, runoff, sewage or stormwater runoff	1%	1%	4%	94%
G. Algae blooms	3%	1%	4%	92%
H. Invasive species such as zebra and quagga mussels, Asian carp	2%	<1%	2%	96%
I. The petroleum industry such as pipelines, drilling, fracking	6%	5%	12%	77%
J. Plastics/microplastics	2%	1%	3%	94%
K. Offshore wind turbines (in the lakes)	2%	24%	19%	55%
L. The impact of heavy rainstorms on infrastructure	7%	5%	21%	68%
M. The impact of COVID-19 (chemical disinfectants, disposable protective equipment)	14	8%	21%	57%

<sup>3</sup> Q9a, Q9b, Q9c, Q9d, Q9e, Q9f, Q9g, Q9h, Q9i, Q9j, Q9k and Q9l correspond to questions of the same number and letter in the 2021 phone poll. Q9m was added to the online poll and is not in the phone poll.

Highest rated in terms of a combined negative impact at 96 percent is invasive species (phone poll 83 percent), followed by municipal runoff at 94 percent (phone poll 83 percent), plastics at 94 percent (phone poll 79 percent) farm runoff at 93 percent (phone poll 78 percent), algae blooms at 92 percent (phone poll 86 percent) and loss of wetlands at 91 percent (phone poll 69 percent).

Climate change followed at 86 percent (phone poll 76 percent), then by flooding or water levels at 73 percent (phone poll 80 percent), the petroleum industry at 77 percent (phone poll 74 percent) and the impact of heavy rainstorms at 68 percent (phone poll 61 percent).

Lowest scored at 57 percent was the impact of COVID-19 (this question was not asked in the phone poll), nuclear waste at 56 percent and offshore wind turbines at 55 percent.



## 4.4 Water removal

The following set of questions asked respondents to rate their level of concern with water removal from the Great Lakes (**Table 4**).<sup>4</sup> They rated each area using a five-point Likert scale from 1-not at all concerned to 5-very concerned. The chart below combines not at all concerned and not concerned (1 and 2) and concerned and very concerned (4 and 5).

**Table 4:** Respondents’ concern with water removal from the Great Lakes and their impact on water quality and water quantity.

**Q10. How concerned are you with the removal of water by each of the following four methods and their impact on the quantity and quality of water in the Great Lakes?**

	Total unconcerned (1 and 2)	3-Neutral	Total concerned (4 and 5)	Do not know
A. The impact of water removals	4%	13%	73%	10%
B. Private wells	25%	19%	51%	6%
C. Agriculture	13%	20%	64%	3%
D. Industry	4%	7%	87%	2%
E. Commercial bottled water extraction	5%	7%	85%	3%

In a question asked in the online survey only (Q10a), 73 percent said they were concerned with the impact of water removals.

With respect to specific areas, water removal by industry rated the highest in terms of concern at 87 percent as it did in the phone poll (83 percent). Next was commercial bottled water extraction at 85 percent (70 percent phone), then agriculture at 64 percent (75 percent phone), while private wells were lowest at 51 percent as it was in the telephone survey (60 percent).

<sup>4</sup> Q10a is a new question and not included in the 2021 phone poll. Q10b corresponds to Q25a of the 2021 phone poll. Q10c corresponds to Q25b in the 2021 phone poll. Q10d corresponds to Q25c in the 2021 phone poll. Q10e corresponds to Q25d in the 2021 phone poll.

## 4.5 Responsibility

Respondents were asked who they believe should be responsible for protecting the health and water quality of the Great Lakes basin (**Table 5**).<sup>5</sup> Options were presented and multiple responses were accepted for these online questions, compared to the phone poll where only one top-of-mind response was accepted per respondent. As a result, findings are not comparable between the online poll and the phone poll.

**Table 5:** Respondents' opinions on who should be responsible for protecting the health and water quality of the Great Lakes basin, by percent of total cases and by percent relative to all responses.

**Q11. Who in your opinion should be responsible for protecting the health and water quality of the Great Lakes basin? Please check off all that apply.**

CURRENTLY RESPONSIBLE	Response %	% Of Cases
Everyone/all	16%	77%
Federal governments	14%	67%
State/Provincial governments	14%	65%
City/local government	13%	59%
Indigenous governments	12%	56%
Residents/individuals	11%	49%
Industry	10%	49%
Environmental groups	10%	45%
Conservation Authorities	<1%	<1%
IJC	<1%	<1%
Don't know	<1%	<1%

Seventy-seven percent of online survey participants (16 percent of responses that total 100 percent) stated that everyone is responsible for protecting the health and water quality of the Great Lakes basin.

<sup>5</sup> Corresponds to Q13 in the 2021 phone poll, but as noted in the text, findings are not comparable.

## 4.6 Role of the individual

Next, the questioning moved specifically to the role of the individual or household in protecting the health and water quality of the Great Lakes using a five-point rating scale (1-not at all important to 5-very important.<sup>6</sup> **Figure 7** below combines the results of very important (5) and important (4) as well as not at all important (1) and not important (2).

**Q12. “How important is the role of the individual or individual household in protecting the health and water quality of the Great Lakes basin?”**



**Figure 7:** Respondents’ rating of the importance of the role of the individual or individual household in protecting the health and water quality of the Great Lakes basin.

Ninety-two percent feel the role of the individual is important or very important in protecting the health of the Great Lakes basin. This compares to the 84 percent that answered important or very important in the phone poll.

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<sup>6</sup> Corresponds to Q14 in the 2021 phone poll.

Respondents were displayed a list of 10 actions and were asked if they would take part in each of them to help protect Great Lakes water quality (Table 6).<sup>7</sup>

**Table 6:** Percent of respondents that said they would be likely to take part in certain actions to help protect the water quality of the Great Lakes.

**Q13. Which of the following actions would you be likely to take part in to help protect the water quality of the Great Lakes? Please check off which ones apply**

ACTIONS LIKELY TO TAKE PART IN	YES
A. Attend a public meeting organized by government or nongovernment organizations	54%
B. Engage in an online forum or group	49%
C. Contact a local elected representative or government official	58%
D. Conserve water at home by using less or installing water efficient fixtures	80%
E. Be aware of or be more careful about what you are disposing down household drains	90%
F. Reduce use/disposal of plastics and waste	91%
G. Purchase products that reduce my household water use	72%
H. Join a local watershed group, volunteer your time or donate money	50%
I. Engage in local water quality sampling	45%
J. Sign a petition	57%

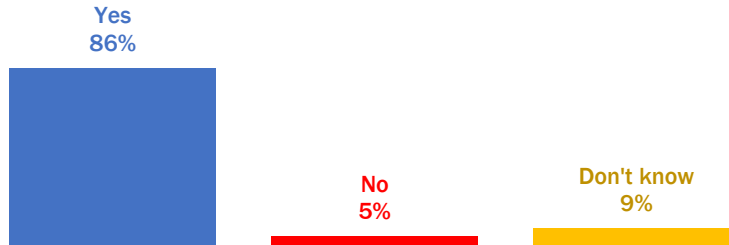
Online respondents are most likely (91 percent) to reduce the use or disposal of plastics (phone poll 76 percent), while 90 percent are likely to be careful of what they are disposing down the drain (phone poll 86 percent), followed by 80 percent that said they are likely to conserve water (phone poll 78 percent) and 72 percent purchase products that reduce household water use (phone poll 64 percent).

<sup>7</sup> Corresponds to Q15 A through J in the 2021 phone poll.

## 4.7 Government regulations

The next question asked respondents whether they would be willing to have increased regulations and enforcement to protect the Great Lakes, even if it resulted in higher costs of consumer items (**Figure 8**).<sup>8</sup>

**Q14. Would you be willing to have greater protection of the Great Lakes through regulations and their enforcement even if it means that it may increase the cost of certain consumer products?**



**Figure 8:** Respondents' willingness to increase regulations and enforcement to protect the Great Lakes that may consequently increase the cost of certain consumer products.

In total, 86 percent of online participants answered that they would be willing to have greater protection of the Great Lakes through regulations and their enforcement even if it meant an increase in the cost of some consumer products. This compares to 51 percent of the phone poll.

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<sup>8</sup> Corresponds to Q17 in the 2021 phone poll.

Online respondents were asked their opinion on having greater protection and its perceived impact on jobs and the economy (**Table 7**).<sup>9</sup>

**Table 7:** Respondents’ opinions on the impact of greater protection, through regulations and their enforcement, on jobs and the economy.

**Q15. In your opinion, would having greater protection through regulations and their enforcement have a positive impact, negative impact or no impact on jobs and the economy?**

RESPONSE	%
Positive	59%
Negative	6%
No Impact	16%
Don't know	19%

Almost six in ten online survey participants replied that greater protection would have a positive impact on the economy (phone poll 21 percent), only 6 percent negative (phone poll 29 percent), 16 percent answered no impact (phone poll 32 percent) and 19 percent were unsure (phone poll 17 percent).

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<sup>9</sup> Corresponds to Q18 in the 2021 phone poll.

## 4.8 Sustainability

In a new question unique to the online poll, respondents were asked to rate their level of agreement with three statements related to sustainability (**Table 8**). 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 8:** Respondents’ level of agreement with statements about their community’s sustainability responsibilities, planning, and agenda.

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

	Total Disagree (1 and 2)	3-Neither agree nor disagree	Total Agree (4 and 5)	Do not know
Q16. My community takes its responsibility to sustain the Great Lakes seriously	26%	22%	46%	6%
Q17. Sustainability related to water and the Great Lakes is included in planning and environmental protection efforts in my community	25%	21%	42%	12%
Q18. My community has an active agenda related to Great Lakes sustainability	29%	22%	33%	16%

Overall results were mixed with agreement levels higher for the indicator related to their community taking its responsibility to sustain the lakes seriously and for their community including sustainability related to water and the Great Lakes in their planning. Agreement was lowest for their community having an active agenda related to Great Lakes sustainability.

# 5. Sources of Water and Drinking Water

## 5.1 Sources

Online survey respondents were asked to identify (from a list provided) the source of their drinking water (Table 9)<sup>1</sup> and where they get most of their drinking water from (Table 10).<sup>2</sup>

**Table 9:** Respondents identified what they think is the source of their tap water.

### Q19. Can you tell me the source of where your tap water comes from?

RESPONSE	%
Great Lakes	41%
Municipal water supply	28%
Groundwater wells / springs	24%
Local lakes or rivers	5%
Do not know	1%
Bottled water / water company	1%

**Table 10:** Respondents identified where they get more of their water for drinking.

### Q20. Where do you get most of your water for drinking?

RESPONSE	%
From your tap unfiltered	50%
From your tap water with a filter (filtration system)	40%
Bottled water/commercial water delivery/cooler	9%
Community/public artesian well, spring or source	1%

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<sup>1</sup> Corresponds to Q20 in the 2021 phone poll.

<sup>2</sup> Corresponds to Q23 in the 2021 phone poll.



## 5.2 Community drinking water

Online respondents were presented with a set of (new and reworded) statements related to their community’s drinking water, and they were asked to rate their level of agreement with them.<sup>3</sup> A five-point rating scale was used, and **Table 11** combines the total disagree (1-Strongly disagree and 2-Disagree) as well as the total agree (4-Agree and 5-Strongly agree) responses.

**Table 11:** Respondents’ level of agreement with statements related to drinking water quality in their community.

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

	Total Disagree (1 and 2)	3-Neither agree nor disagree	Total Agree (4 and 5)	Do not know
Q21. I have access to clean, safe drinking water in my community	8%	6%	85%	1%
Q22. I trust my water utility/source of my water	9%	13%	76%	2%
Q23. My tap water is safe to drink	10%	8%	80%	2%
Q24. My tap water tastes good	16%	14%	69%	1%
Q25. My tap water needs to be filtered	37%	21%	40%	2%
Q26. All members of my community have affordable, equitable access to drinking water	22%	14%	54%	10%
Q27. My community effectively manages, and treats used wastewater or sewage	19%	19%	50%	12%

Agreement was highest among respondents regarding access to clean, safe drinking water, the safety of drinking tap water, and trust in their drinking water utility (or other source of drinking water). Results were lower in terms of agreement for all community members having affordable, equitable access to drinking water and for their community effectively managing wastewater. Results were split on the issue of tap water needing to be filtered.

<sup>3</sup> Q21 corresponds to Q24a in the 2021 phone poll and was also asked in the 2018 phone poll. Q22, Q23, Q24 and Q25 are unique to this online poll. Q26 corresponds to Q24b in the 2021 phone poll. Q27 corresponds to Q24c in the 2021 phone poll.

## 5.3 Billing

In a new question, online poll participants were asked about how much they pay for their monthly water bill (**Table 12**). They were asked to either provide the average amount or estimate the cost.

**Table 12:** Reported average monthly water bill costs.

### Q28. On average, how much do you pay for your household's monthly water bill?

	Don't pay for water	\$25 or less	\$26-\$50	\$51-\$75	\$76-\$100	\$101-125	More than \$125	Do not know
Average monthly		7%	31%	22%	14%	15%	10%	
Best Guess		10%	39%	16%	13%	11%	10%	
<b>TOTAL RESULTS</b>	<b>35%</b>	<b>4%</b>	<b>15%</b>	<b>9%</b>	<b>6%</b>	<b>6%</b>	<b>5%</b>	<b>20%</b>

In another new question,<sup>4</sup> respondents were asked how much more they would be willing to pay on their monthly water bill to support initiatives that would improve swimmable, fishable, drinkable waters in the Great Lakes (**Table 13**). Drinking water was the area more would be willing to pay in relation to swimming and fishing. The \$5 to \$10 range was most acceptable, while few would pay more than \$25 per month.

**Table 13:** Respondents' willingness to pay particular dollar amounts a month on their water bill to improve water quality in the Great Lakes that is 'very safe' for fishing, swimming, and drinking the water.

### Q29. In order to improve water quality in the Great Lakes to a quality that is 'very safe' for the following, would you be willing to pay an addition amount on top of your household's current monthly water bill?

	Not willing to pay	\$5/month	\$10/month	\$25/month	\$50/month	More than \$50
<b>A. Fishing</b>	<b>33%</b>	<b>29%</b>	<b>20%</b>	<b>9%</b>	<b>3%</b>	<b>6%</b>
<b>B. Swimming</b>	<b>28%</b>	<b>29%</b>	<b>24%</b>	<b>9%</b>	<b>4%</b>	<b>6%</b>
<b>C. Drinking</b>	<b>20%</b>	<b>22%</b>	<b>27%</b>	<b>16%</b>	<b>7%</b>	<b>8%</b>

<sup>4</sup> The 2021 phone poll added a new question about billing specific to willingness to pay to support initiatives to improve water quality (Q27) but the nature and format of the question is different and lumps together "swimmable, fishable, drinkable waters" in the question, rather than asking about them separately as in Q29a, Q29b and Q29c above. Therefore, results are not comparable between this online poll and Q27 in the 2021 phone poll.

## 6. Recreational Water Activities

In a newly worded and structured question, respondents were asked to identify the ways they engage with the Great Lakes. Multiple responses were accepted from a list provided (**Table 14**).<sup>1</sup>

**Table 14:** Activities respondents engage in on the Great Lakes for recreational, cultural or other purposes.

**Q30. In what ways do you engage recreationally, culturally or otherwise with the Great Lakes? Please check all that apply or type in other responses**

TOPIC NAMED	Response %	% of Cases
Walking/hiking	20%	85%
Swimming/diving	18%	75%
Canoeing/kayaking/wind surfing	14%	61%
Boating/sailing	12%	49%
Birdwatching	11%	49%
Fishing	10%	42%
Cultural activities	6%	24%
Political action	6%	24%
Hunting	2%	10%
Wild rice harvesting	<1%	2%
Sightseeing/viewing/relaxing near	<1%	2%
Winter activities	<1%	1%
Do not know	<1%	1%
Work	<1%	<1%
None	<1%	<1%

Most online survey participants or 85 percent of them (20 percent of responses that total 100 percent) walk or hike, followed by swimming/diving, canoe/kayak, birdwatch and fish.

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<sup>1</sup> This question corresponds with Q30 in the 2021 phone poll, but the phone poll first posed a screening question (Q28) that first asked if the respondent or their household members use the Great Lakes for leisure or recreational purposes. Then only the subset of respondents that said yes (46 percent) were subsequently asked Q30. Therefore, it is not suitable to compare these online poll findings with the 2021 phone poll findings.

All online respondents were next asked to rate the importance of three (new or reworded) indicators related to interacting with the Great Lakes, using a five-point scale (1-not at all important to 5-very important) (**Table 15**).<sup>2</sup>

**Table 15:** Respondents’ rating of the importance of interactions with the Great Lakes.

	Total unimportant (1 and 2)	3-Neither important nor unimportant	Total important (4 and 5)	Do not know
Q31. How important is it to you that the Great Lakes are available for leisure or recreational purposes?	1%	2%	97%	<1%
Q32. How important is your interaction with nature in the Great Lakes?	<1%	2%	98%	<1%
Q33. How important is your interaction with water in the Great Lakes region?	1%	2%	97%	1%

A very high level of importance was placed on all three areas.

When asked a new question if interaction with nature provides mental health benefits, almost all or 98 percent answered yes or that it does (**Figure 9**).

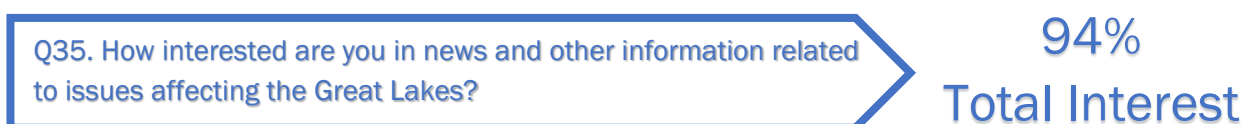


**Figure 9:** Respondents’ opinions about the mental health benefits of interacting with nature and water in the Great Lakes.

<sup>2</sup> Q31 corresponds to Q31 in the 2021 phone poll. Q32 and Q33 are new to this online poll.

## 7. Information Sources

The following section is about the sources residents of the Great Lakes currently use and would prefer to access to obtain information. They were first asked about their interest in receiving information related to issues affecting the Great Lakes using a five-point scale (1-not at all interested to 5-very interested) (**Figure 10**).<sup>1</sup> Ninety-four percent responded total interested, with 38 percent responding ‘4-interested’ and 56 percent responding ‘5-very interested.’



**Figure 10:** Respondents’ interest in news and other information related to issues affecting the Great Lakes.

In the next question (reworded from the telephone poll), respondents were asked what sources they use to obtain information about the Great Lakes and related environmental issues (**Table 16**).<sup>2</sup> They were presented with a list and allowed to provide multiple responses. The internet, newspapers (online & print) and social media were the top three mentions.

**Table 16:** Sources where respondents current get their Great Lakes/environmental information.

**Q36. From what sources do you currently get information about the Great Lakes and related environmental issues? Choose all that apply.**

SOURCE NAMED	Response %	% of Cases
Internet (in general)	21%	80%
Newspaper (online or print)	16%	62%
Social media	13%	50%
Television	11%	44%
Word of mouth	11%	41%
Government websites	11%	41%
Radio	10%	24%
IJC website	5%	20%
Associations/community groups/environmentalists	2%	10%
Scientists/experts	<1%	1%
Do not know	<1%	1%
All of the above	<1%	<1%

<sup>1</sup> Corresponds with Q33 in the 2021 phone poll.

<sup>2</sup> Corresponds with Q32 in the 2021 phone poll, but the question wording was significantly adjusted, so results are not directly comparable.

With the final probe in this section, respondents were asked about preferred sources they use to obtain trusted information (**Table 17**).<sup>3</sup> They were presented with a list and allowed to provide multiple responses. The internet, newspapers (online and print) and government websites were the top three mentioned trusted sources of information.

**Table 17:** Respondents’ trusted sources for information about the Great Lakes and related environmental issues.

**Q37. What are your preferred sources to get information you trust about the Great Lakes and related environmental issues? Choose all that apply.**

<b>SOURCE NAMED</b>	<b>Response %</b>	<b>% of Cases</b>
Internet (in general)	20%	59%
Newspaper (online or print)	18%	52%
Government websites	15%	45%
Television	10%	29%
Radio	10%	29%
Social media	9%	27%
IJC website	8%	23%
Word of mouth	6%	18%
Associations/community groups/environmentalists	3%	9%
Scientists/experts	1%	3%
Do not know	1%	2%
All of the above	<1%	1%

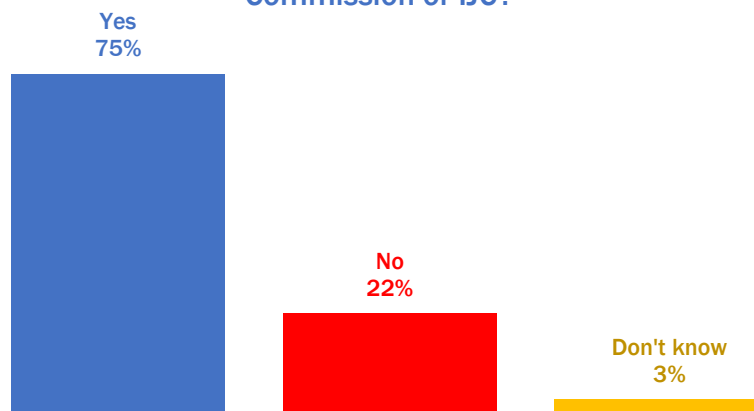
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<sup>3</sup> Corresponds with Q34 in the 2021 phone poll. Results from the Response % column in Table 17 can be compared to the results reported in Q34 in the phone poll (total out of 100 percent).

## 8. International Joint Commission and Great Lakes Water Quality Agreement

Questioning moved onto the topic of the International Joint Commission (IJC) and Great Lakes Water Quality Agreement. A total of 75 percent of online respondents have heard of or were aware of the International Joint Commission, compared to 25 percent in the random telephone survey (**Figure 11**).<sup>1</sup>

Q38. Have you heard of, or are you aware of, the International Joint Commission or IJC?



**Figure 11:** Respondents' awareness of the International Joint Commission.

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<sup>1</sup> Corresponds with Q36 in the 2021 phone poll.

The 75 percent aware of the IJC were then asked what they consider its role to be (**Table 18**).<sup>2</sup> One open response was accepted.

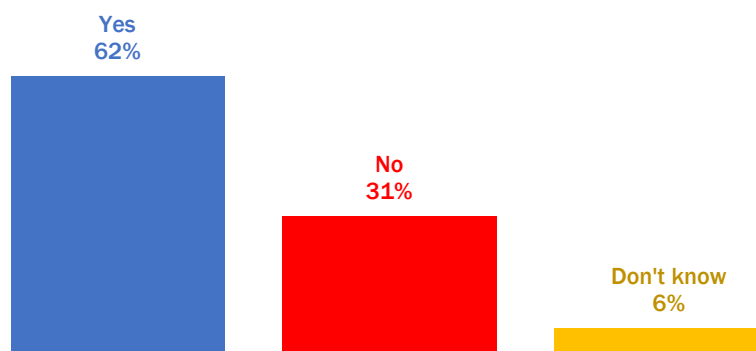
**Table 18:** Opinions of the 75 percent of respondents that are aware of the International Joint Commission of the role of the International Joint Commission.

**Q39. What in your opinion is the role of the IJC?**

Protect the lakes/ensure water quality/management/enforcement	32%
Do not know	30%
International cooperation/cooperative in protecting the lakes	16%
Important/necessary/positive	8%
Resolve (transborder) issues/dispute resolution	5%
Regulate/oversee water levels	3%
Nothing/ineffective	2%
To advise (government, politicians, etc.)	2%
To ensure regulations/laws to protect the lakes	1%
Help clean up the Great Lakes	1%
Source of information	<1%
Ensure commercial traffic	<1%

In the final question in this section, all survey respondents were asked if they have heard of or were aware of the Great Lakes Water Quality Agreement (**Figure 12**).<sup>3</sup> In total, 62 percent said that they were aware of the agreement, compared to only 17 percent in the random telephone sample.

**Q40. Have you heard of, or are you aware of, the Great Lakes Water Quality Agreement?**



**Figure 12:** Respondents' awareness of the Great Lakes Water Quality Agreement.

<sup>2</sup> Corresponds to Q37 in the 2021 phone poll.

<sup>3</sup> Corresponds to Q41 in the 2021 phone poll.



## 9. Value Statements

All online respondents were asked to rate their level of agreement with a series of value statements on a scale from one strongly disagree to five strongly agree with value statements related to the Great Lakes. Results in this table combine the total agree results of strongly agree and agree (4 and 5) (**Table 19**).<sup>1</sup> All questions are repeated verbatim from the phone, and the online poll added a new statement about hopefulness for the future of Great Lakes water quality.

**Table 19:** Respondents’ level of agreement with 10 value statements about the Great Lakes.

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

Statement	Total Agree
Q41. Actions should be taken now to ensure the health and water quality of the Great Lakes for future generations	96%
Q42. It is important to protect the Great Lakes water quality for the personal benefits that I receive	93%
Q43. The Great Lakes water quality should be protected for the benefit of people living in the Great Lakes Basin	97%
Q44. The Great Lakes water quality should be protected for the benefit of fish and wildlife who depend on the lakes	98%
Q45. The economy of the region will suffer if the Great Lakes are not healthy	94%
Q46. The health of residents in the region will suffer without healthy Great Lakes	96%
Q47. I am concerned about the health and water quality of the Great Lakes as a whole	94%
Q48. I am most concerned about the health and water quality of the lake that is closest to me	92%
Q49. I am concerned about the impacts of climate change on the health and water quality of the Great Lakes	88%
Q50. I feel hopeful about the future of water quality in the Great Lakes	51%

Agreement scores were very strong for all indicators, with the exception being Q50 where only 51 percent agreed. Overall, results were also significantly higher than the findings from the 2021 phone poll, ranging from 11 percent greater (Q48) to 29 percent greater (Q42).

<sup>1</sup> Q41 corresponds with Q42 in the 2021 phone poll. Q42 corresponds with Q43 in the 2021 phone poll. Q43 corresponds with Q44 in the 2021 phone poll. Q44 corresponds with Q45 in the 2021 phone poll. Q45 corresponds with Q46 in the 2021 phone poll. Q46 corresponds with Q47 in the 2021 phone poll. Q47 corresponds with Q48 in the 2021 phone poll. Q48 corresponds with Q49 in the 2021 phone poll. Q49 corresponds with Q50 in the 2021 phone poll. Q50 is unique to this online poll and was not included in the 2021 phone poll.

# 10. First Nations, Métis and Tribal Nation Member Responses

First Nations, Métis and Tribal Nation member respondent breakdown by Canadian and US respondents are highlighted in **Table 20** below.<sup>1</sup>

**Table 20:** Responses to screening question asking whether they self-identify as Indigenous.

## Q51. Do you identify as Indigenous (Canada: First Nations or Métis) (United States: Tribal Nation/Native American)?

RESPONSE	%
No	75%
Yes, US Tribal Nation	10%
Yes, Canadian First Nations	14%
Yes Métis	1%

The 24 percent of those identifying as First Nations or Tribal Nation members were then asked if they live on or off reserve (**Table 21**).<sup>2</sup>

**Table 21:** Of the 24 percent of respondents self-identifying as First Nations or Tribal Nation members, proportion of respondents reporting to live on or off reserve.

## Q52. Do you live on or off reserve?

RESPONSE	%
On	14%
Off	86%

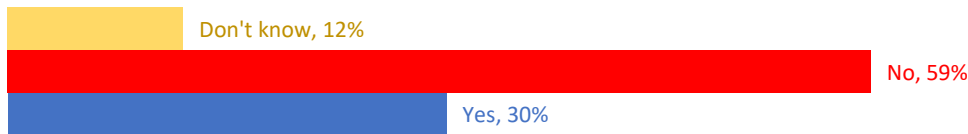
First Nations and Tribal Nation members were asked in Q53 to identify their Nation or community affiliation. Results are not listed here and can be obtained by request with the complete poll data in an Excel spreadsheet.

<sup>1</sup> Corresponds to Q51 in the 2021 phone poll.

<sup>2</sup> In the 2021 phone poll, results are reported separately for Canadian First Nations members (Q52b in the phone poll) and US Tribal Nation members (Q53b in the phone poll).

Next, the 25 percent of those identifying as First Nations, Métis and Tribal Nation members were asked the following two probes about the ways they engage with the Great Lakes (**Figure 13 and 14**).<sup>3</sup>

**Q54. Are any of the ways that you engage with the lakes threatened or are you no longer able to participate in them because of the poor health and water quality of the lakes?**



**Figure 13:** Of the 25 percent of respondents self-identifying as First Nations, Métis and Tribal Nation members, proportion that reported whether poor health and water quality of the Great Lakes threaten or prevent engaging with the lakes.

**Q55. Are there fish, plant or wildlife species of cultural importance you are concerned about due to the threats facing the health and water quality of the Great Lakes?**



**Figure 14:** Of the 25 percent of respondents self-identifying as First Nations, Métis and Tribal Nation members, proportion that reported whether they are concerned about fish, plant or wildlife species of cultural importance that are threatened by poor Great Lakes health and water quality.

Three in 10 answered that the ways they engage with the Great Lakes are threatened and 44 percent that fish, plant and wildlife species of cultural importance to them face threats.

<sup>3</sup> Q54 in this online poll corresponds to Q55 in the 2021 phone poll. Q55 in this online poll corresponds to Q57 in the 2021 phone poll.

# 11. Demographics

## D1. AGE GROUP

15-18	1%
19-24	3%
25-34	12%
35-44	16%
45-54	17%
55-64	23%
65-74	19%
Over 75	8%
Prefer not to answer	3%

## D2. HIGHEST LEVEL OF EDUCATION

Some high school or less	1%
Graduated high school	3%
Some post-secondary (college, university)	13%
Graduated college/university	37%
Graduate/professional degree level education	44%
Prefer not to answer	2%

## D3. OCCUPATION

Retired/disability	23%
Refusal	19%
Clerical/white collar/support	17%
Professionals	16%
Management	9%
Service sector/sales	7%
Technician/trades/skilled	3%
Self-employed	2%
Student	2%
Laborer/unskilled	1%
At home/caregiver/not looking for work	1%
Unemployed/social assistance	<1%
Armed forces	<1%

## D4. POLITICAL PERSUASION

Liberal/progressive	46%
Moderate	23%
Prefer not to answer	15%
Conservative	9%
Apolitical/nonpolitical	7%

## D5. SPIRITUALITY

Not spiritual	26%
Slightly spiritual	20%
Moderately spiritual	28%
Very spiritual	15%
Prefer not to answer	10%

## D7. RACE/ETHNICITY

White/Caucasian/European origin	47%
First Nations/Métis/Tribal Nation	25%
Refused	18%
American/Canadian (no racial/ethnic identity)	4%
Black/African American or Canadian/African	2%
East Asian (China, Japan, Vietnam)	1%
South/Southeast Asian (India, Pakistan)	1%
Mixed	1%
Middle Eastern/North African	1%
Hispanic/Latinx	1%

## D6. RELIGIOUS AFFILIATION

Prefer not to answer	42%
None/Agnostic/Atheist	17%
Evangelical (Christian)	11%
Roman Catholic	8%
Just spiritual/new age, etc.	6%
Protestant (unspecified)	3%
Anglican/Episcopalian	3%
United/Methodist	2%
Lutheran	2%
Indigenous	1%
Buddhist (Zen, etc.)	1%
Judaism	1%
Presbyterian	1%
Muslim	1%
Hinduism	<1%
Sikhism	<1%

## D8. GENDER IDENTITY

Female	50%
Male	43%
Prefer not to answer	5%
Non-binary	1%
Gender fluid	<1%
Two-spirited	<1%
Gender neutral	<1%
Transgender	0%

## D9. COMBINED HOUSEHOLD INCOME

Less than \$25,000	5%
\$25,000 to \$49,999	9%
\$50,000 to \$74,999	14%
\$75,000 to \$99,999	13%
\$100,000 or more	32%
Prefer not to answer	26%