Lake Champlain Basin
Public Awareness Survey

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Prepared for the Lake Champlain Basin Program by

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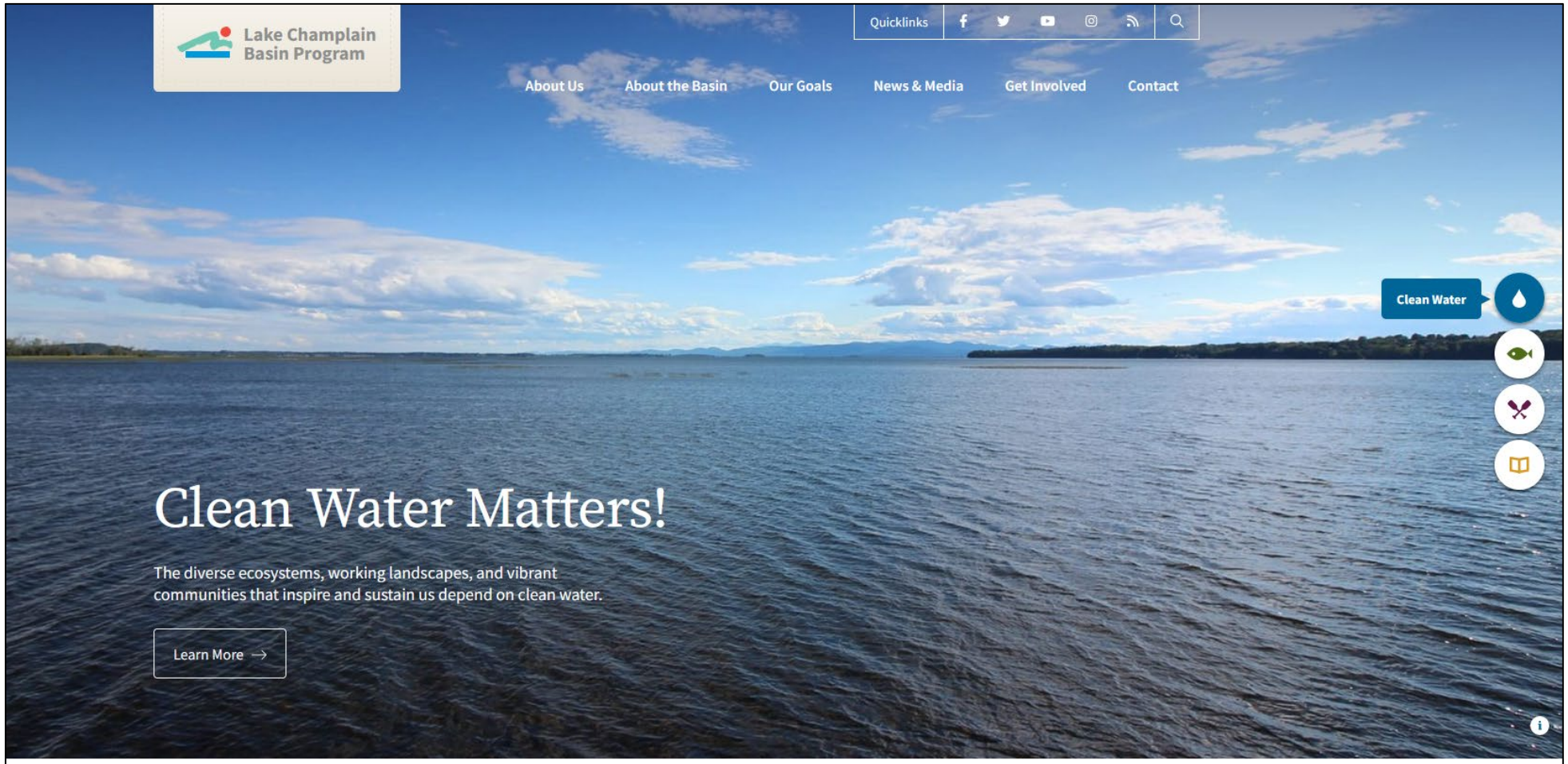
Why a survey?

Education & Outreach



Education & Outreach

State of the Lake Report

Education & Outreach

International Year of the Salmon Festival

Education & Outreach

World Water Day

Education & Outreach

How do we assess these efforts?

Survey Goals

- Knowledge, Attitudes and Engagement
- Information sources
- Target audiences & communication channels

Survey Vitals

- June – October 2021
- 1,675 responses
  - New York – 382
  - Vermont – 711
  - Québec – 582
- 36 questions
- 147-page Report

Demographic Summary

Age

18 to 24 years	1.2%
25 to 34 years	5.9
35 to 44 years	10.7
45 to 54 years	15.9
55 to 64 years	27.0
65 to 74 years	28.9
75 years and over	10.4

Demographic Summary

Age

18 to 24 years	1.2%
25 to 34 years	5.9
35 to 44 years	10.7
45 to 54 years	15.9
55 to 64 years	27.0
65 to 74 years	28.9
75 years and over	10.4

Demographic Summary

Education

Less than High School/Secondary School	0.5%
High School/Secondary School graduate	9.4
Some College or University	13.7
College, University, Technical degree, Certificate, etc.	45.5
Advanced degree, Graduate degree	30.8

Demographic Summary

Home Ownership

Own	90.7%
Rent	9.3

High value placed on clean water

85.8%	Healthy waterways are a critical part of thriving communities
71%	Rely on Lake Chaplain for their well-being
96%	Addressing water quality should be a priority for communities
85%	Town budgets should help pay for stormwater runoff management

Is Lake Champlain Clean?

45% Clean

45% Not clean

More people believed local waterbodies were clean than believed Lake Champlain was clean.

Knowledge

Most serious challenge facing health of streams, rivers, ponds and lakes	
Agriculture/Farming	18%
Runoff	12
Pollution, Contaminants	9
Sewage (septic systems, CSOs, municipal wastewater)	9
Humans/Human Activity, Development	8
Nutrients, Fertilizers, Chlorophyll	8
Algae/Cyanobacteria	6
Pesticides, Chemicals, Herbicides	5

Knowledge

Impact Category	Rank
Phosphorus	7.9
Cyanobacteria (blue-green algae)	7.7
Manure and fertilizer from farm fields washing into waterways	7.7
Pesticides	7.4
Wastewater treatment facilities overflowing into waterways	7.4
Increased temperature changes leading to cyanobacteria blooms	7.1
Non-native species like spiny water flea, zebra mussel	7.0

Impact ranked on a scale of 0 to 10, with 10 having the most impact

Knowledge

Phosphorus sources

Impact Category	Rank
Agricultural Land	7.7
Wastewater Treatment Facilities	6.5
Developed land	6.0
Wetlands	3.3
Forested land	2.9

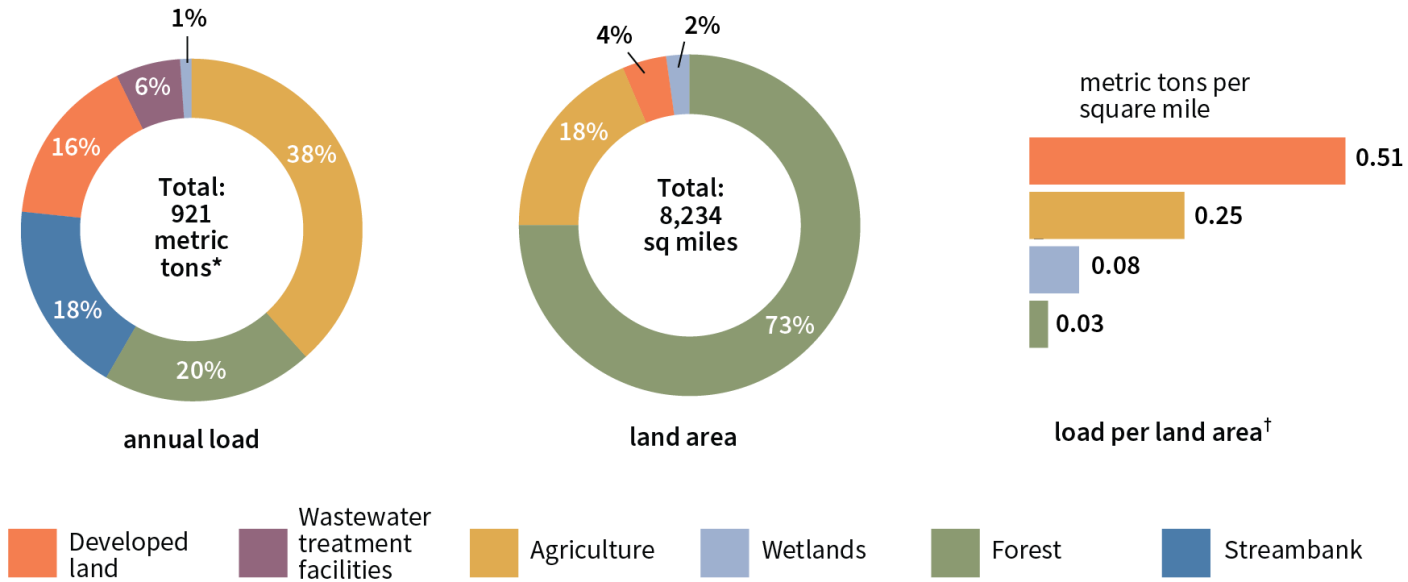


Figure 5 | Annual phosphorus loading to Lake Champlain by land cover

Knowledge

58% Can explain a watershed to someone else.

34% Heard of watershed but couldn’t explain.

8% First time hearing of a watershed.

Behavior and Engagement

“Never” Responses	%
Participate in an invasive species removal project	65.8
Get a soil test before applying phosphorus fertilizer to lawns or gardens	54.0
Raise your lawnmower blade so that it cuts no shorter than three inches	12.7
Dispose of medicines like prescriptions at a designated site or on a Drug Take Back Day	9.9
Pick up dog waste	8.1
“Clean, drain, dry” your watercraft to prevent the spread of invasive species	7.2
Keep food waste out of a sink garbage disposal	5.6
Limit use of salt on driveways or sidewalks during winter	5.0
Practice general water conservation at your home	3.4
Dispose of toxic materials at a hazardous waste drop-off center	2.7

Behavior and Engagement

Actions in previous three years	%
Voted for initiatives, funding or candidates that support protection of water resources	64.2
Talked to others about what they can do to protect water quality	47.9
Assessed water quality in your community	23.6
Donated money to a water quality organization, program or activity	23.3
Attended a meeting about water quality	18.4
Participated in a water quality improvement project	13.5

Awareness of Information Sources

27% Know things they could do to reduce water pollution

24% Know how to find information about protecting water quality

13% Know about efforts in their community to protect or improve water quality

Information Sources

Existing Sources of Information	%
Newspaper reports	21.9
Outreach from a water or environmental organization	20.3
Local Television Station or Show	20.3
Municipal/Town/City meetings	13.6
Radio reports	12.6
Online social media	11.3
Online web sites	10.6
Events	7.2
Outreach or Training Webinars	6.5
LCBP State of the Lake report	6.4
Front Porch Forum or Other Community Listserve	5.8

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Information Sources

Preferred ways to get information	%
Read information on a web site	28
Read a brochure or informational document	23
Hear information on a local TV or radio station	22
Receive information in the mail	19
Watch a video on a web site	18
See information on social media (like Facebook, Instagram, Twitter)	15
Participate in an educational field trip	11
Attend an in-person presentation	9
Listen to a podcast	8
Participate in a hands-on workshop	7
Visit an educational table at a local event	6
Attend a webinar	5
Have someone visit your home	1

Cross Tabs

- Age
- Knowledge of watershed concept
- Distance from Lake Champlain
- Geography

Age x Information Sources

	18-34	35-54	55-74	75+
Attend an in-person presentation	5.8%	8.5%	10.8%	6.9%
Attend a Webinar	5.8%	4.2%	5.8%	2.3%
Participate in hands on workshop	11.8%	8.9%	7.3%	2.9%
Read a brochure or informational document	27.7%	20.5%	23.6%	29.3%
Read information on a web site	24.4%	27.2%	29.6%	26.9%
Watch a video on a web site	24.6%	18.7%	17.5%	21.7%
Have someone visit your home	3.3%	1.6%	1.1%	0.0%
Hear information on a local TV or radio station	24.4%	23.6%	22.0%	24.6%
Visit an educational table at a local event	6.7%	4.4%	6.5%	5.1%
See information on social media (like Facebook, Instagram, Twitter)	28.6%	26.1%	10.6%	4.6%
Listen to a podcast	15.5%	10.9%	7.1%	5.7%
Participate in an educational field trip	14.3%	14.1%	10.3%	6.3%
Receive information in the mail	21.0%	19.3%	18.1%	21.7%
I am not interested in learning about ways to protect or improve water quality	1.7%	0.4%	1.3%	0.6%

Age x Information Sources

	18-34	35-54	55-74	75+
Attend an in-person presentation	5.8%	8.5%	10.8%	6.9%
Attend a Webinar	5.8%	4.2%	5.8%	2.3%
Participate in hands on workshop	11.8%	8.9%	7.3%	2.9%
Read a brochure or informational document	27.7%	20.5%	23.6%	29.3%
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Have someone visit your home	3.3%	1.6%	1.1%	0.0%
Hear information on a local TV or radio station	24.4%	23.6%	22.0%	24.6%
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See information on social media (like Facebook, Instagram, Twitter)	28.6%	26.1%	10.6%	4.6%
Listen to a podcast	15.5%	10.9%	7.1%	5.7%
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I am not interested in learning about ways to protect or improve water quality	1.7%	0.4%	1.3%	0.6%

Knowledge x Awareness

	Know watersheds	Just heard of watersheds
Know what they can do to reduce water pollution	82%	65%
Know how to find information about protecting water quality	79%	45%
know about efforts in their community to improve water quality	56%	30%
know that planting native trees along waterways improves flood resilience	92%	69%

Knowledge x Action

	Know watersheds	Just heard of watersheds
Voted for initiatives, funding or candidates that support protection of water resources	71%	47%
Talked to others about what they can do to protect water quality	55%	43%
Donated money to a water quality organization, program or activity	28%	7%
Attended a meeting about water quality	26%	6%
Participated in a water quality improvement project	19%	7%

Distance from Lake Champlain

	< 2.25 miles	> 20 miles
Always think about water quality of Lake Champlain	25%	10%
Have heard about watersheds and could explain them to someone else	54%	65%
Think the Lake is very unclean	18%	5%
Always pick up dog waste	76%	60%
Strongly agree that more should be done to address water quality in the lake	74%	55%

Survey Applications

Survey Applications

			MISSISQUOI BAY		NORTHEAST ARM*		MALLETTS BAY		MAIN LAKE		SOUTH LAKE	
		Trend Start	STATUS	TREND	STATUS	TREND	STATUS	TREND	STATUS	TREND	STATUS	TREND
CLEAN WATER	Phosphorus in Lake (p. 13)	1990										
	Phosphorus from rivers (p. 14)	1991										
	Phosphorus from WWTFs† §(p. 15)	1995										
	Cyanobacteria blooms (p. 11)	2013										
	Fish consumption advisories† (p. 7)	2018										
HEALTHY ECOSYSTEMS	Sea lamprey wounding† (p. 24)	2003										
	New aquatic invasive species (p. 22)	2018										
	Invasive water chestnut coverage (p. 26)	2018										
CLIMATE IMPACTS	Lake Champlain freeze-over (p. 21)	1906	Trend: Lake surface freezing over less frequently.									

** Northeast Arm indicator statuses and trends for in-lake phosphorus concentrations, tributary phosphorus loading to the Lake, and cyanobacteria blooms do not include data from St. Albans Bay.*

† These lake-wide indicators are the same for all segments.

§ Wastewater treatment facilities

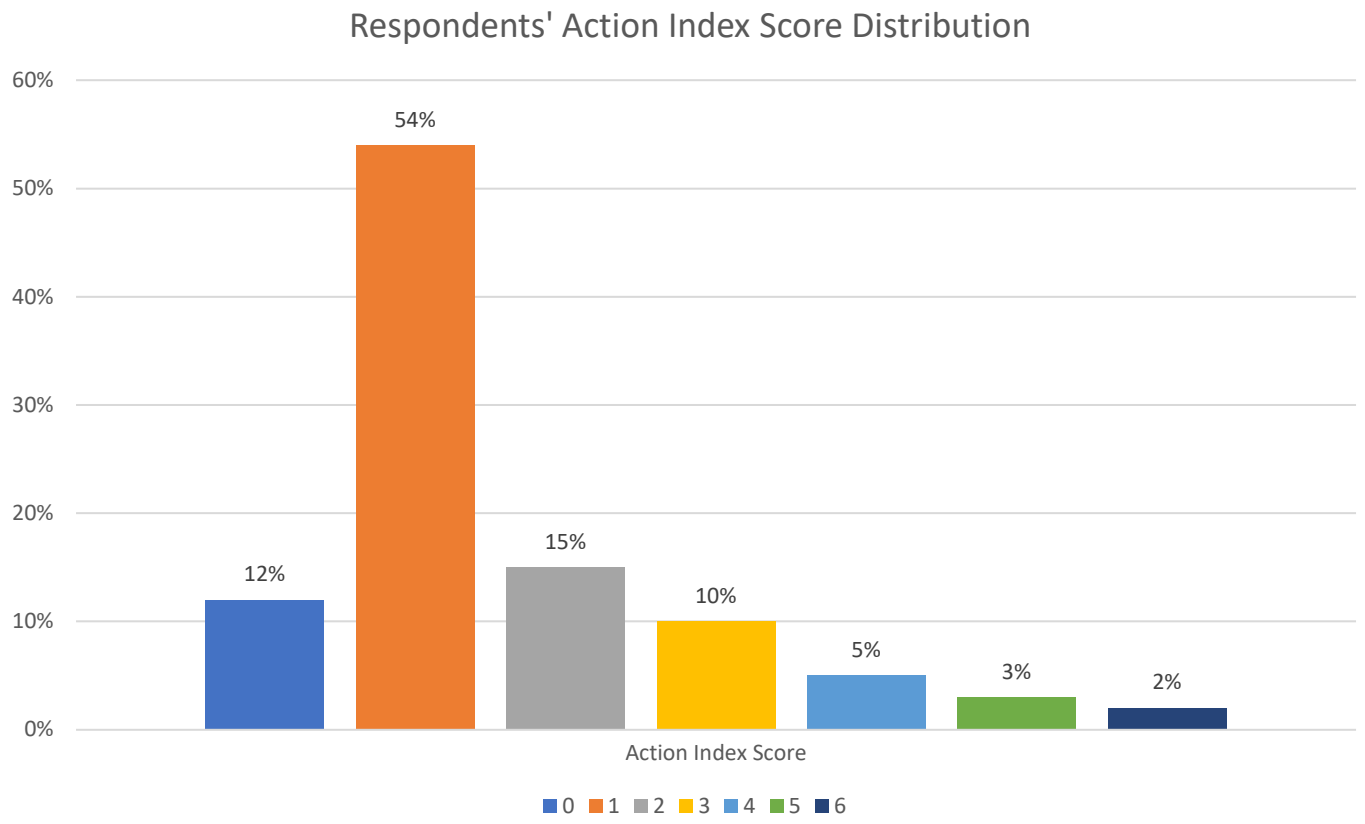
Some trends may be impacted by year-to-year differences in data collection and reporting. This is especially true for cyanobacteria bloom data, which is collected by a network of volunteer community scientists.

Action Index

In the past three years have you ever done any of the following to help protect or improve water quality?

1. Attended a meeting about water quality
2. Assessed water quality in your community
3. Talked to others about what they can do to protect water quality
4. Participated in a water quality improvement project
5. Donated money to a water quality organization, program or activity
6. Voted for initiatives, funding or candidates that support protection of water resources

Action Index



Recommendations

- Partner with local TV and radio news shows
- Partner with newspapers
- Consider minimizing effort/support for site visits (*e.g.*, tabling)
- Developing short informational documents from *State of the Lake*
- Highlight efforts in local communities
- Reinvigorate “Don’t P on the Lawn”
- Target recreation access areas for outreach

Thank you

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