Lake Champlain Non-Point Source Pollution Subwatershed Assessment and Management Plan Update

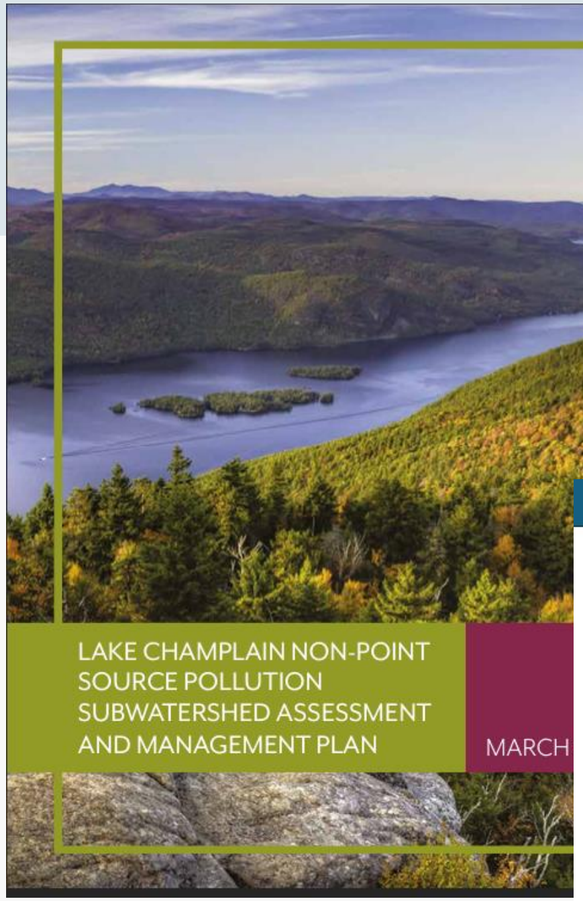
NYCAC Presentation

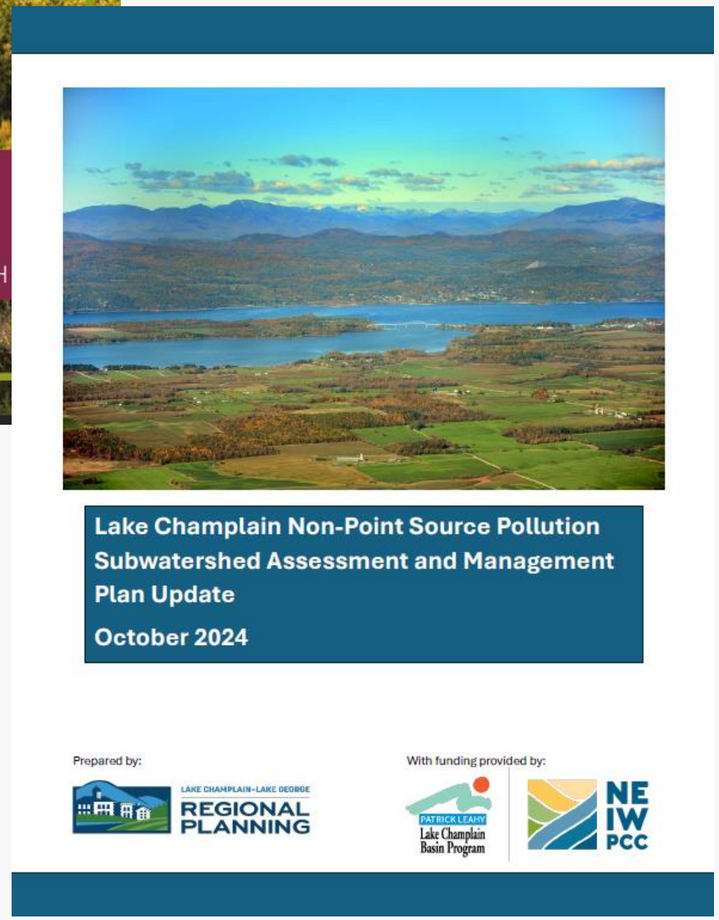
April 28, 2025

LAKE CHAMPLAIN–LAKE GEORGE
REGIONAL PLANNING

Project Background

- The 2018 Plan identified over 120 implementation projects in 19 subwatersheds, millions dollars in need
- Has been used as a resource to guide implementation and funding by our organizations and communities
- Update funded by LCBP and began in 2022





PATRICK LEAHY Lake Champlain Basin Program

NE IW PCC

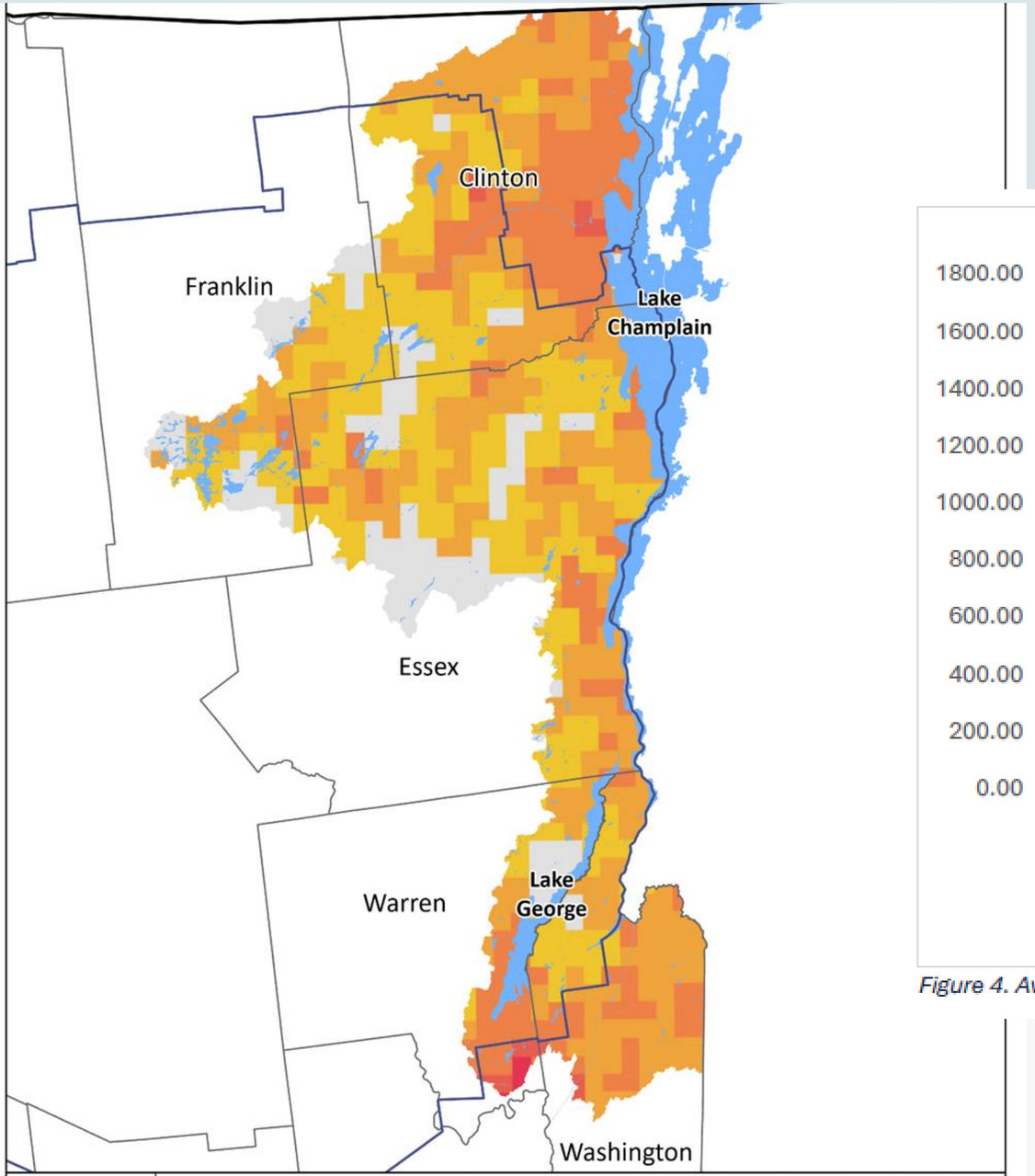
So, what has changed since 2018?

Population

- A total of 178,947 people living in the watershed
- Clinton County remains as having the largest population in the watershed
- Essex has lost the largest percentage of population
- Since 2010, there has been a cumulative loss of ~10,200 people

Table 1: 2020 Population per County within the Lake Champlain Watershed of NY Source: 2020 United States Decennial Census

County	Total 2020 Population within Lake Champlain Watershed	Percent Change of Total Population in the Watershed 2010-2020
Clinton	78,078	-2.7%
Essex	34,022	-6%
Franklin	7,244	-5.6%
Warren	36,526	-4.4%
Washington	23,077	-5.5%
Totals	178,974	-4.2%



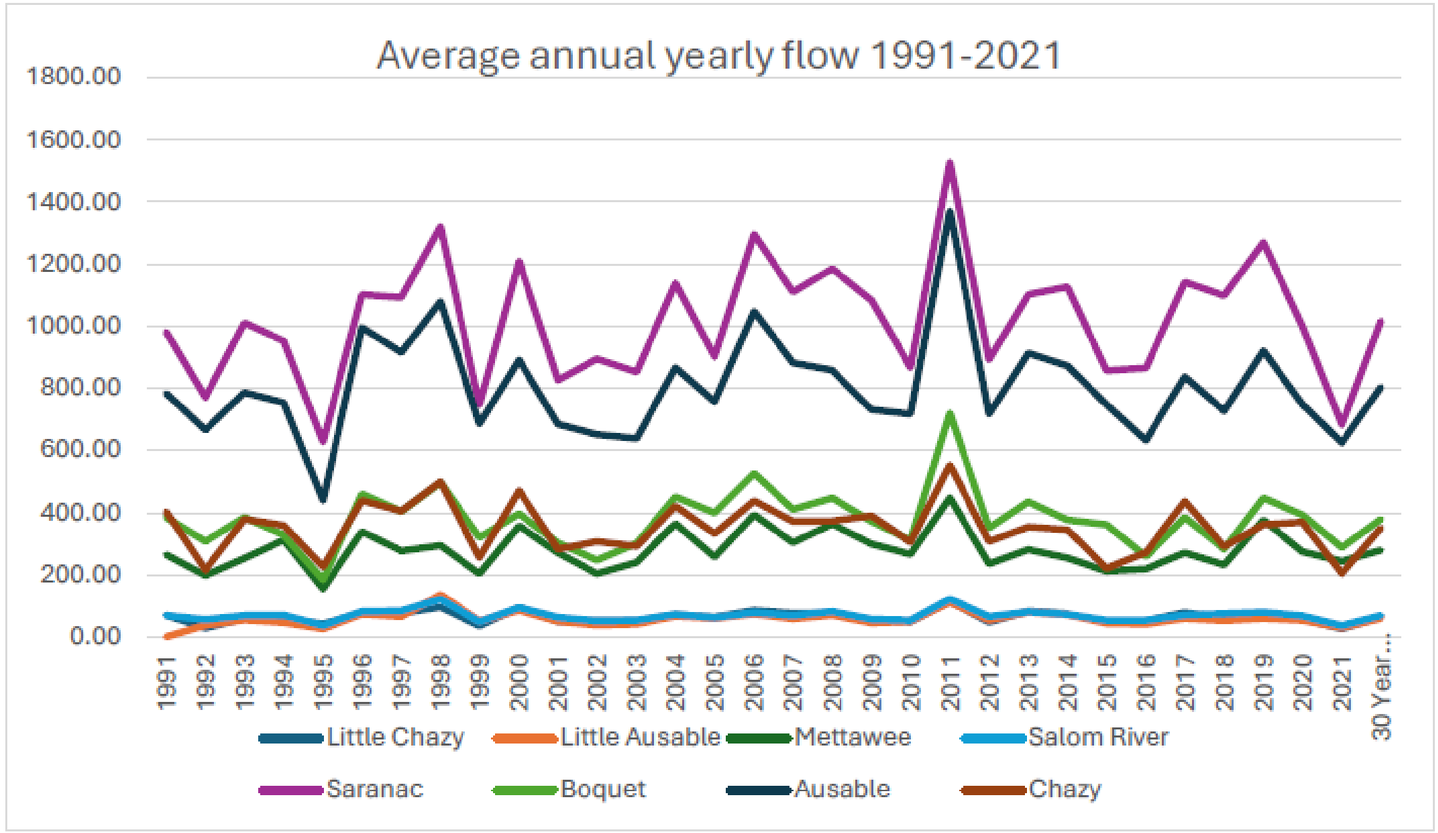


Figure 4. Average annual yearly flow at tributaries Source: USGS

TMDL

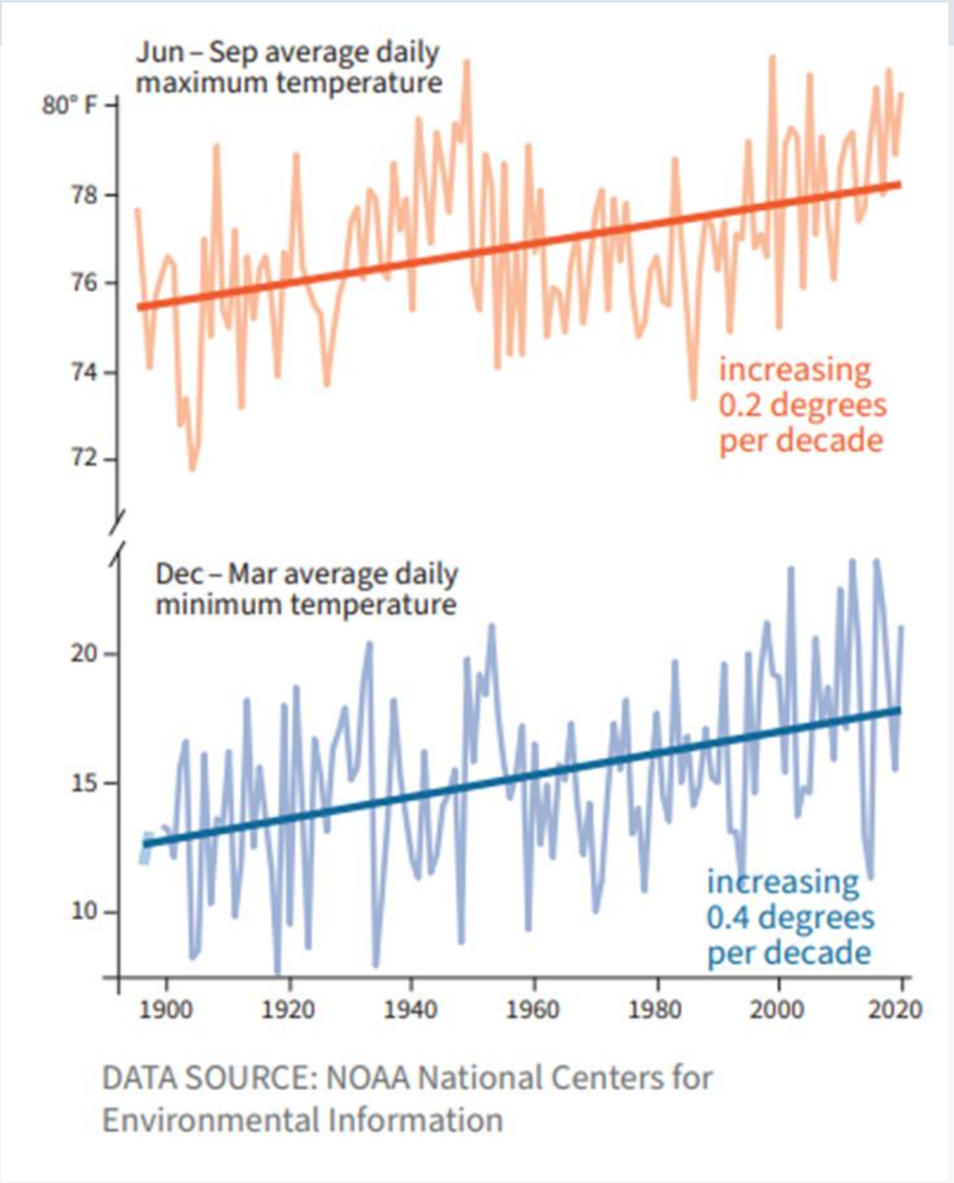
Table 5. Observed TP Mean Concentration Compared to TMDL Criteria

Lake Segment	TMDL Total TP Criteria (mg/L)	TMDL Baseline TP Mean Concentration (1990–1991) (mg/L)	TP Mean Concentration (2002–2019) (mg/L)
South Lake B	0.054	0.058	0.052
South Lake A	0.025	0.034	0.036
Port Henry	0.014	0.015	0.015
Otter Creek	0.014	0.015	0.015
Main Lake	0.010	0.012	0.012
Cumberland Bay	0.014	0.014	0.014
Isle La Motte	0.014	0.012	0.017

Lake Champlain Total Maximum Daily Load (TMDL) Watershed Implementation Plan. NYDEC, 2024

Emerging Issues

- The watershed continues to face challenges from issues such runoff and inadequate septic systems
- New challenges stemming from a changing climate
- Winter and Summer temperatures increasing – Between 4.6-6.8°F by 2050
- Increase of 4-12% annual precipitation by 2050
- Projected increasing intense storm events
- Warmer weather = better conditions for HABs
    - 30 since 2012 (NYS Beaches)



Public Outreach

- Attended watershed events
  - World Water Day (Plattsburgh)
  - Lake George Farmers Market (Lake George)
- Feedback from Stakeholders
  - CWICNY Presentation
  - Input from SWCDs, project area site visits
- Public Survey

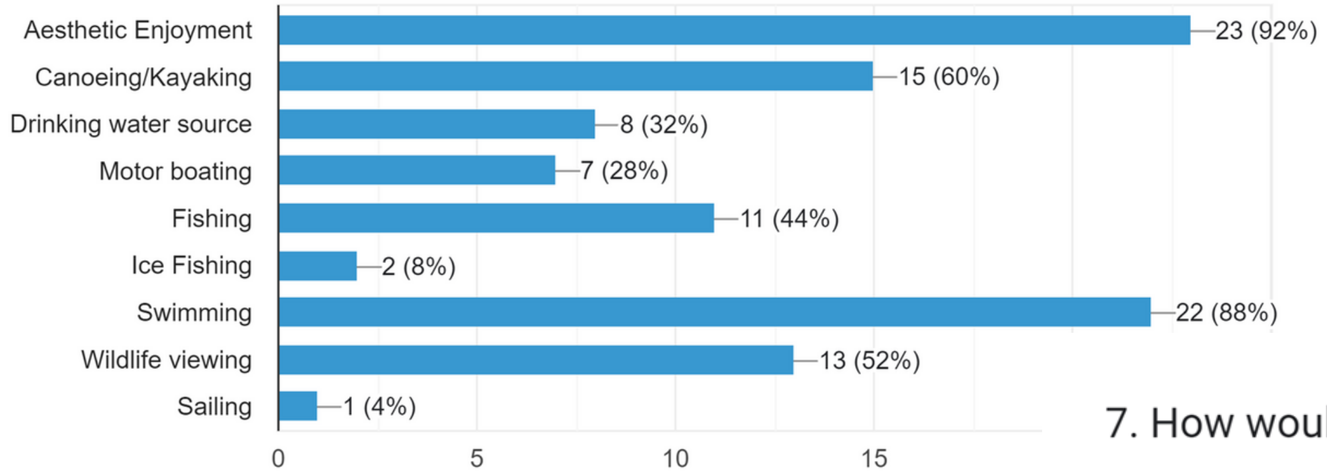
Survey

- Public survey was conducted winter 2023 - summer 2024
- Outreach done via the LCLGRPB and partners
- Responses were received from all five counties in the watershed, the majority coming from residents within Essex County.
- Parts of the survey were compared to the responses given during the 2014 public outreach efforts for the 2018 Plan

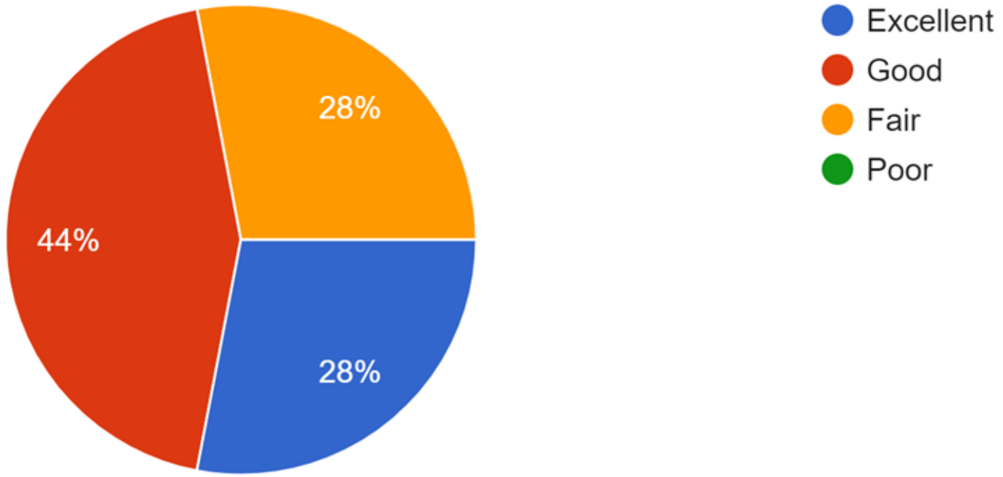
3. What waterbody/waterbodies do you use in your community?		
Lake George	Lake Champlain	Lake George
LaChute River	Lake George	Lake Champlain
Saranac Lakes	Lake Flower	Lake Colby
Bouquet River	Champlain Canal	Mettawee River
Saranac River		

Survey

4. How do you use this waterbody? (Select all that apply)



7. How would you describe the water quality of this waterbody?

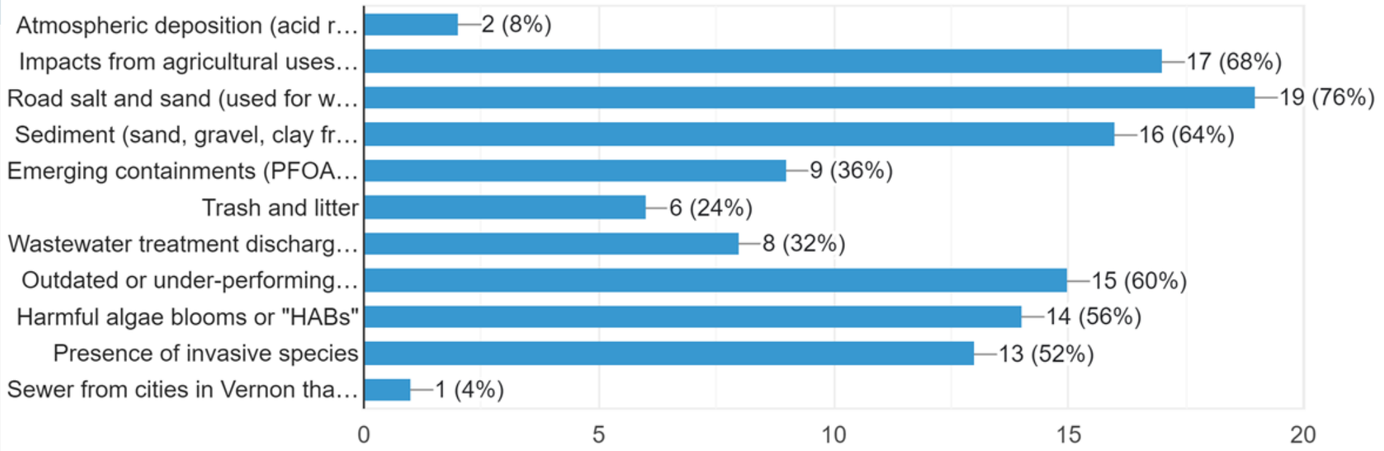


Survey

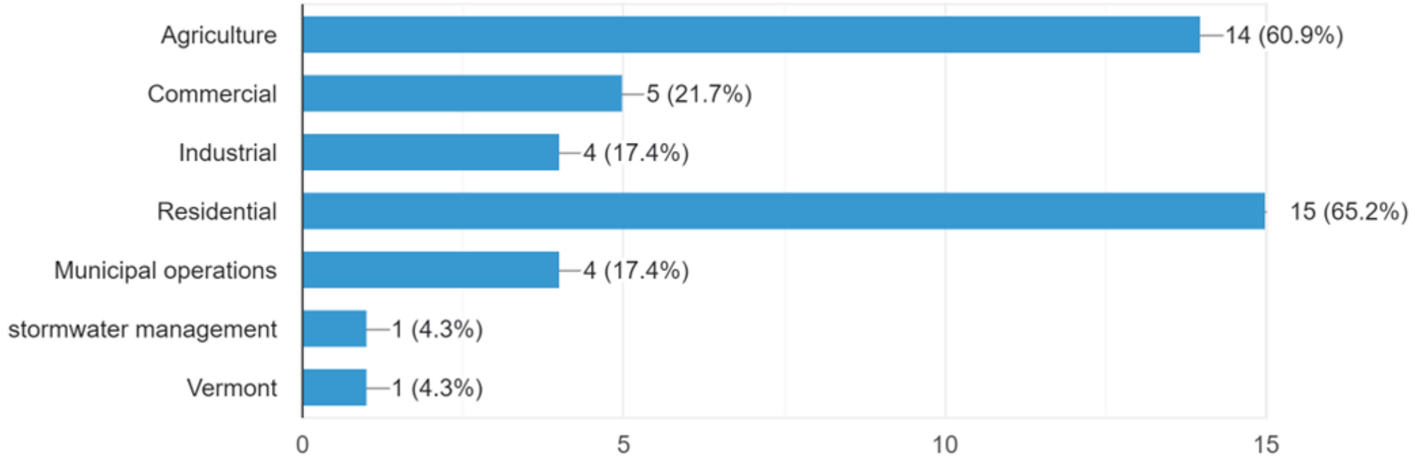
Compared to the 2014 Survey:

- **Road salt (de-icing materials) and sediment have become a greater concern for residents in the watershed**
- **Harmful Algae Bloom was not identified as a threat in 2014**
- **Agriculture and residential land uses are still recognized as large contributing factors to NPS. Municipal Operations is no longer seen as a top threat**

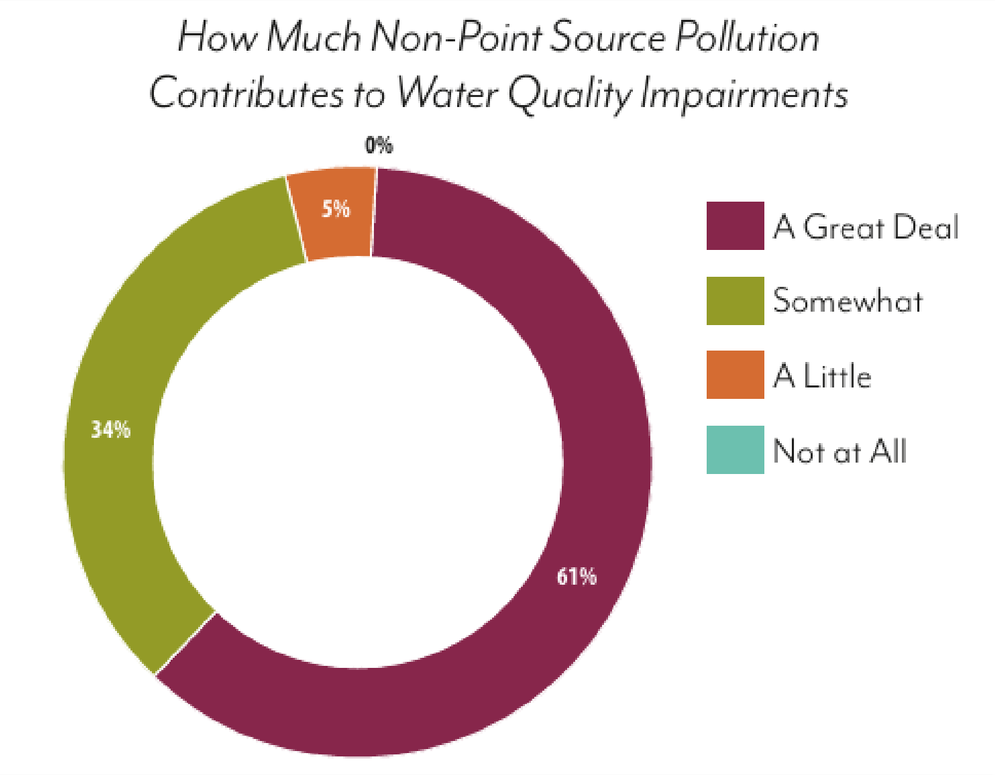
11. What pollutants do you think are the biggest threat to water quality in your community? (Select top 5)



12. What land uses in your community do you think contribute most to water quality impairments?

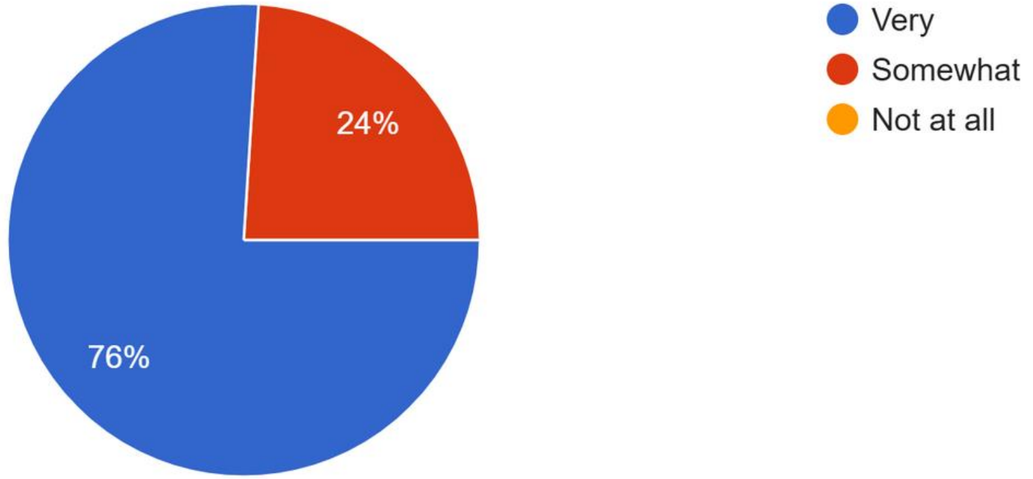


Survey

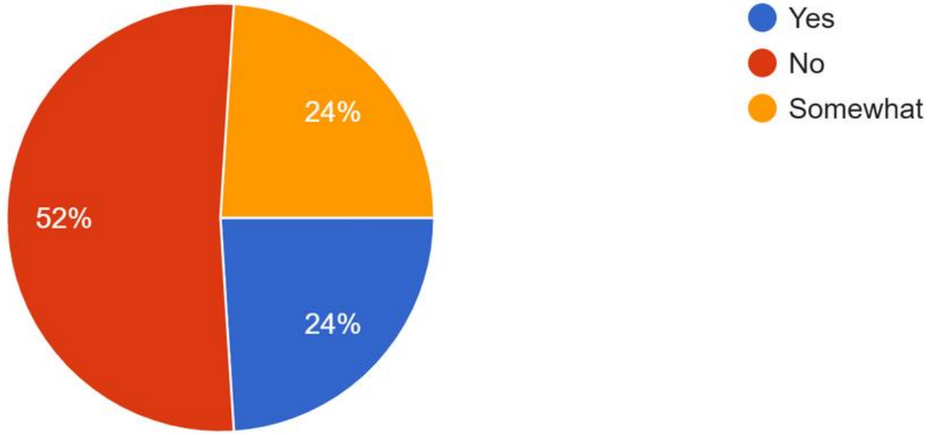


2014 Survey Result

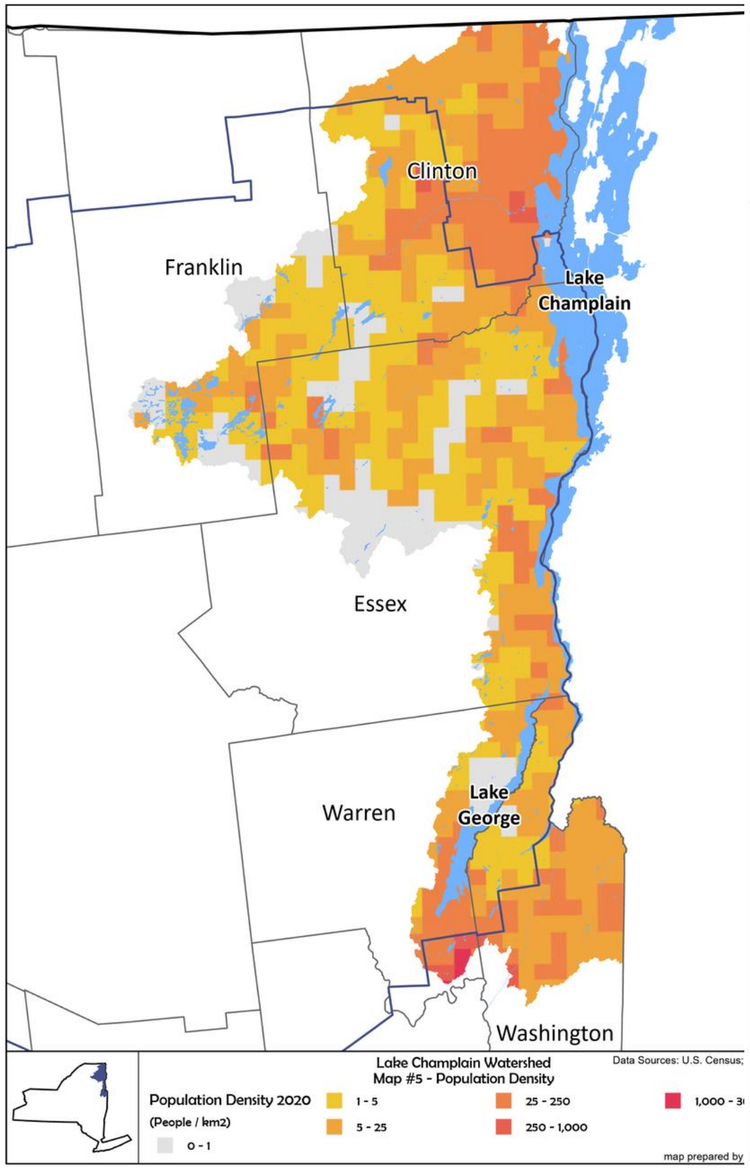
10. How much do you think non-point source pollution affects water quality?

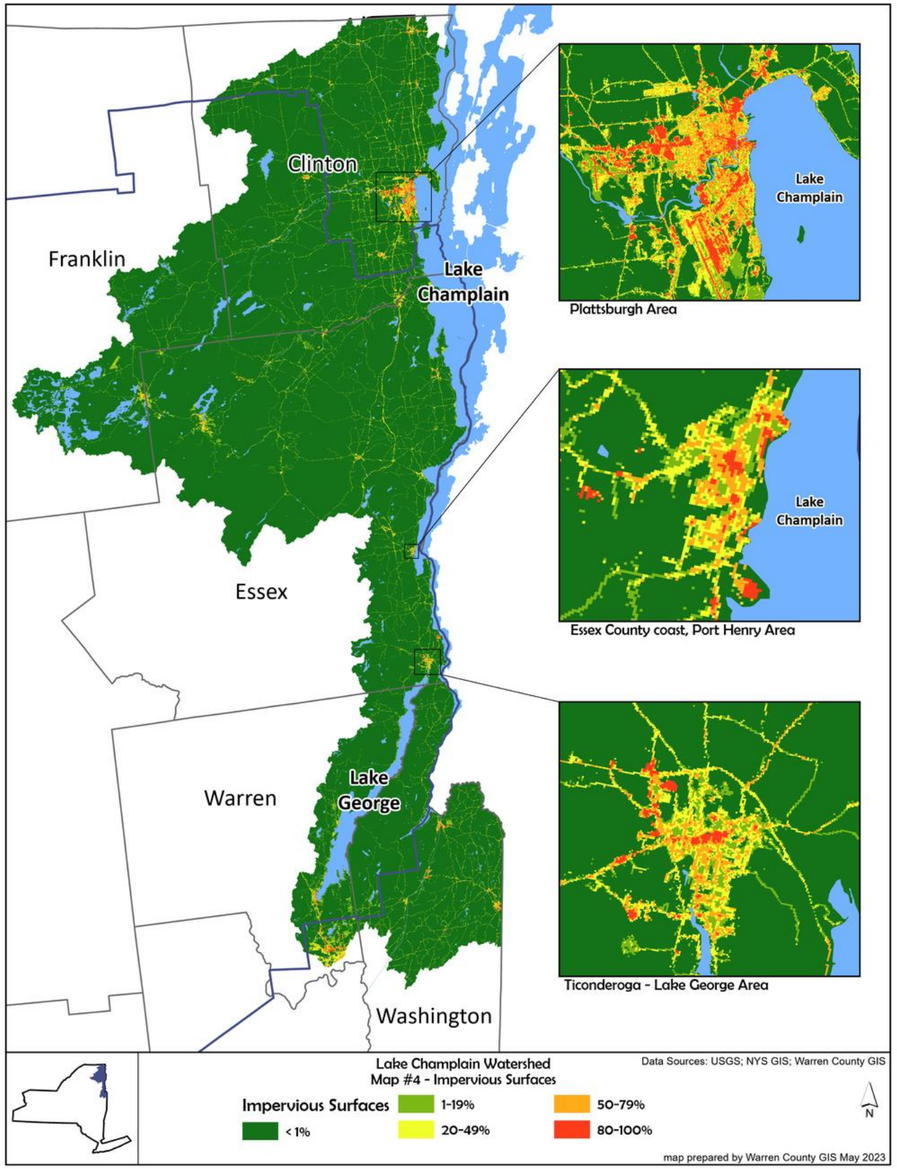


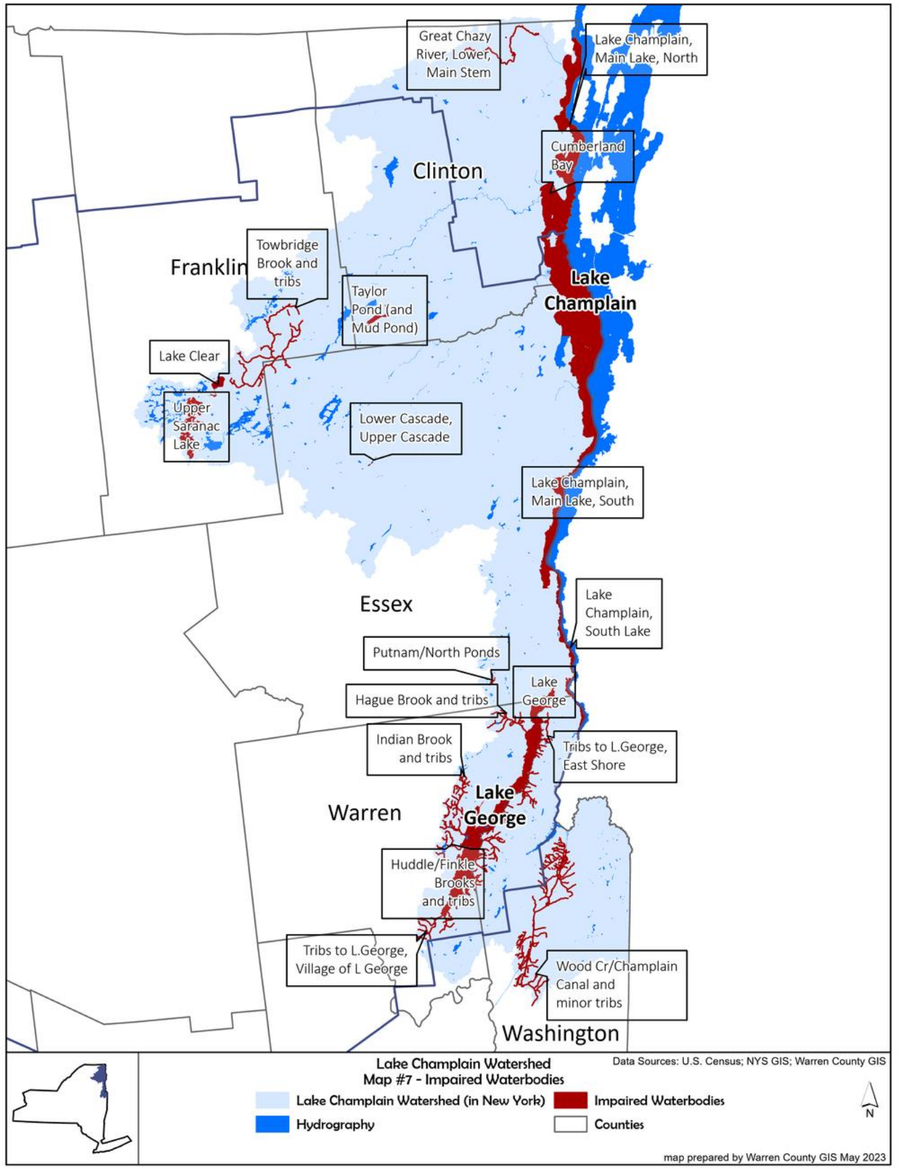
14. Do you feel the water quality of this waterbody has improved over the last 10 years?



Mapping

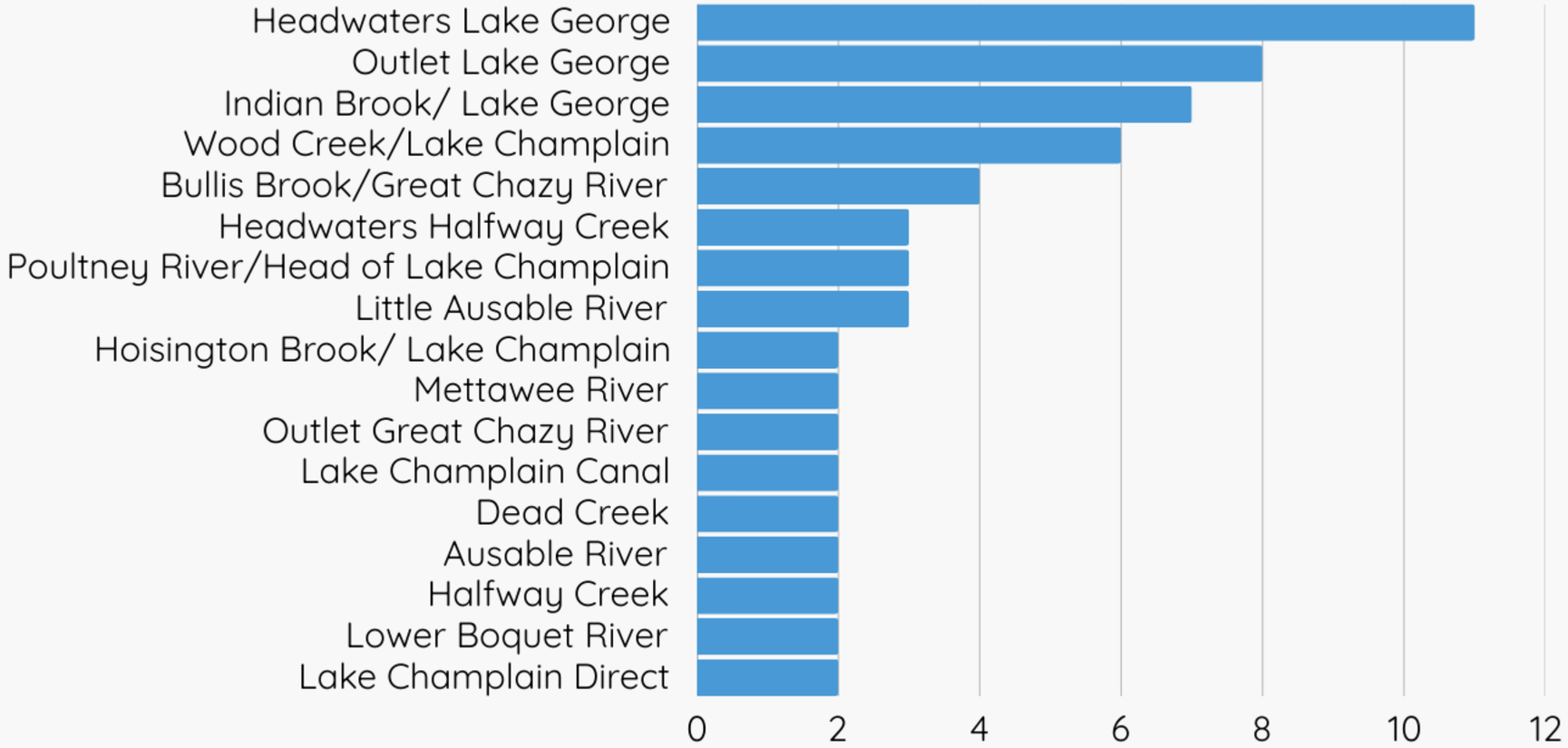

Clinton
Franklin
Lake Champlain
Essex
Warren
Lake George
Washington
Lake Champlain Watershed
Map #5 - Population Density
Data Sources: U.S. Census;
Population Density 2020
(People / km2)
0 - 1
1 - 5
5 - 25
25 - 250
250 - 1,000
1,000 - 3
map prepared by

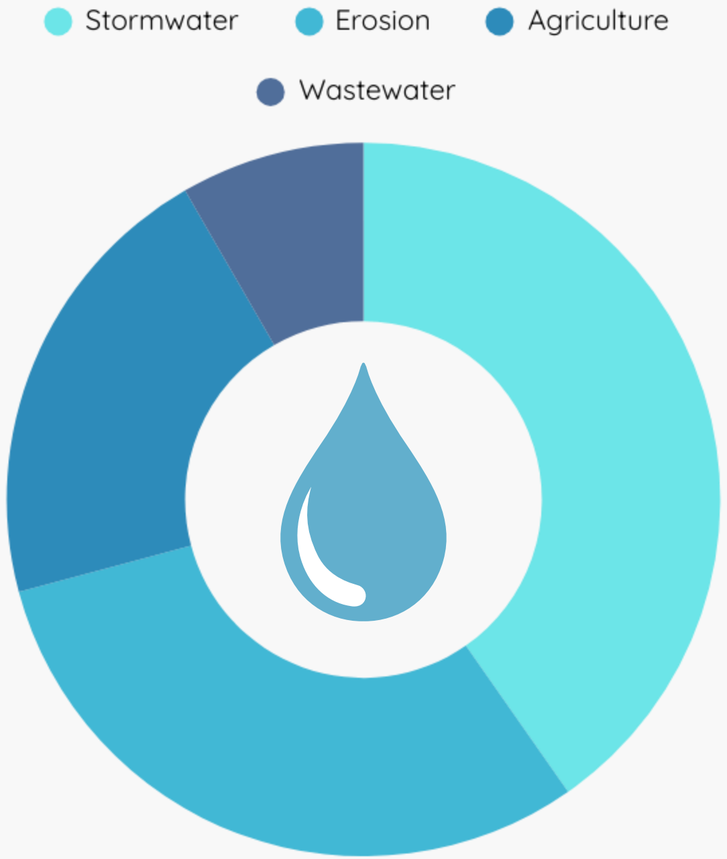

Clinton
Franklin
Lake Champlain
Essex
Warren
Lake George
Washington
Plattsburgh Area
Essex County coast, Port Henry Area
Ticonderoga - Lake George Area
Lake Champlain Watershed
Map #4 - Impervious Surfaces
Data Sources: USGS; NYS GIS; Warren County GIS
Impervious Surfaces
< 1%
1-19%
20-49%
50-79%
80-100%
N
map prepared by Warren County GIS May 2023


Great Chazy River, Lower, Main Stem
Lake Champlain, Main Lake, North
Cumberland Bay
Clinton
Towbridge Brook and tribs
Franklin
Taylor Pond (and Mud Pond)
Lake Champlain
Lake Clear
Upper Saranac Lake
Lower Cascade, Upper Cascade
Lake Champlain, Main Lake, South
Essex
Lake Champlain, South Lake
Putnam/North Ponds
Hague Brook and tribs
Lake George
Indian Brook and tribs
Tribs to L.George, East Shore
Warren
Lake George
Huddle/Finkle Brooks and tribs
Tribs to L.George, Village of L George
Wood Cr/Champlain Canal and minor tribs
Washington
Lake Champlain Watershed
Map #7 - Impaired Waterbodies
Data Sources: U.S. Census; NYS GIS; Warren County GIS
Lake Champlain Watershed (in New York)
Hydrography
Impaired Waterbodies
Counties
N
map prepared by Warren County GIS May 2023

Implementation Progress

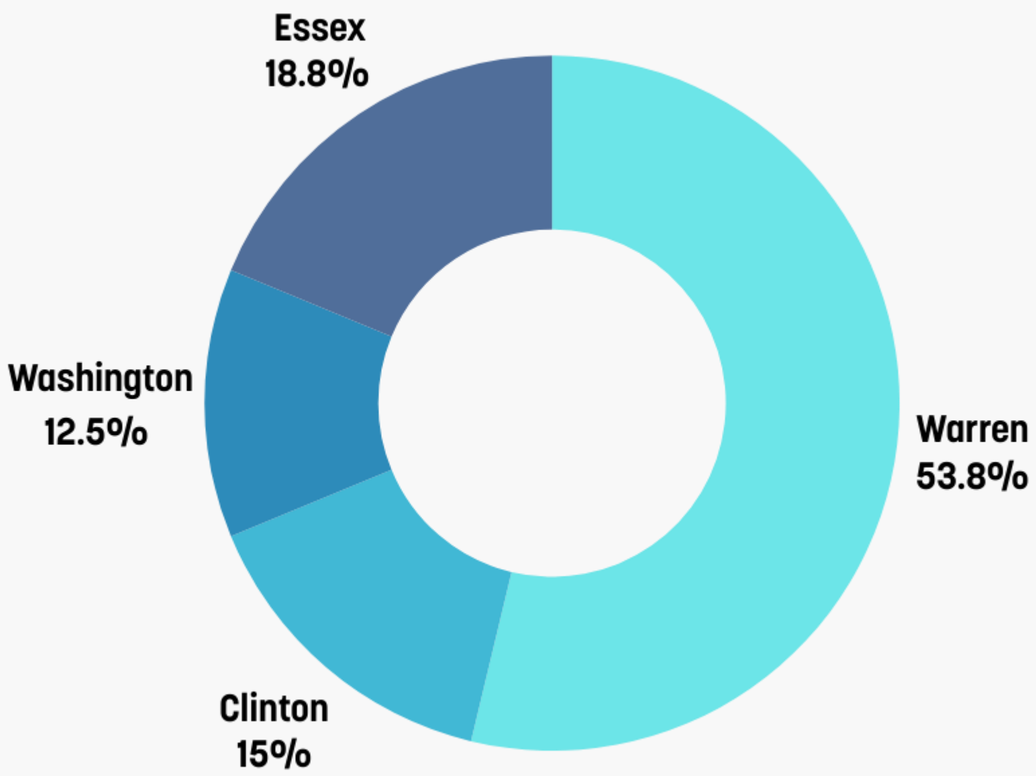
- **Completed or significant progress on 62 identified projects**
- **Projects completed within most of the identified priority watersheds**
- **Most projects completed within Headwaters Lake George Watershed**
- **Over $36 Million in funding to the Lake Champlain Watershed**





Projects Update

- Total of 99 projects identified, including 37 new projects
- Over $197 million in funding needs documented
- Projects organized by the 2018 priority subwatersheds
- Expanded scope to include areas beyond original priority subwatersheds
- New online dashboard created for easier project tracking and updates:



https://www.lclgrpb.org/lake-champlain-basin-pollution-reduction

Project Implementation

Priority Subwatershed #7 - Poultney River- Head of Lake Champlain

Location	Location (Lat/Long)	Project Narrative	Project Cost	Potential Funding Sources	Involved Parties	Timeframe
Village of Whitehall *	Various	Implementation of Village Green Infrastructure Plan (2022)	$160,000	NYSDEC, LCBP	Village, Washington Co. SWCD NYSDEC, LCLGRPB	1-3 years
Village of Whitehall	43°32'47.92"N 73°24'11.21"W	Village WWTP upgrades	$20M	NYSDEC, NYSDOS, NYSEFC, USHUD,USDA	Village, NYSDEC	5-10 years
Village of Whitehall	Various	Village wastewater system upgrades and I&I reduction	$2M	NYSDEC, NYSDOS, NYSEFC, USHUD,USDA	Village, NYSDEC	3-5 years

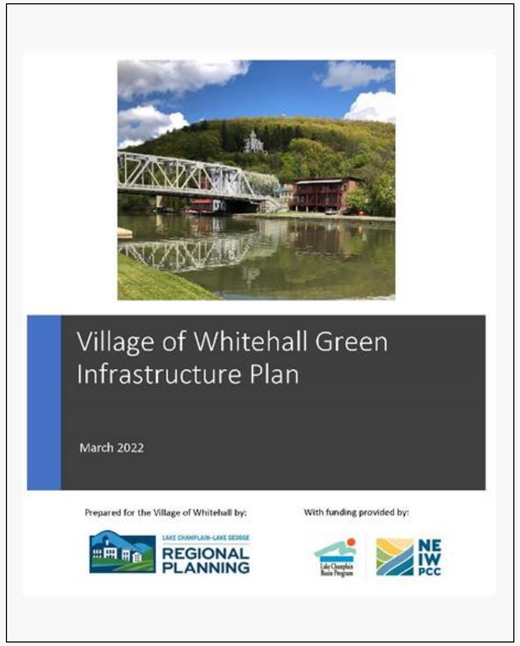
Project Profiles

- Project profiles were completed to help guide implementation
- Projects were chosen based on impact and readiness to implement
- Estimated pollutant load reductions
- Three projects selected
  a. Village of Whitehall Green Infrastructure (Stormwater)
  b. Implementation of Cedar Court Stormwater Collection System (Stormwater,flooding)
  c. Implementation of the Ausable River Restoration Program (Erosion)

Project Profiles - Load Reductions

Village of Whitehall Green Infrastructure

- Phosphorus - 5.02 lbs/yr
- Nitrogen - 18.49 lbs/yr
- Sediment - .07 lbs/yr

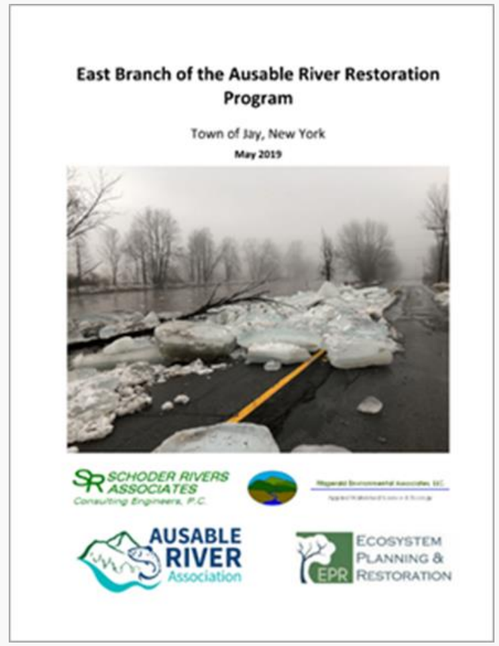


Cedar Court Stormwater Collection

- Phosphorus - 30 lbs/yr
- Nitrogen - 206.50 lbs/yr
- Sediment - 15,100 lbs/yr

Ausable River Restoration Program

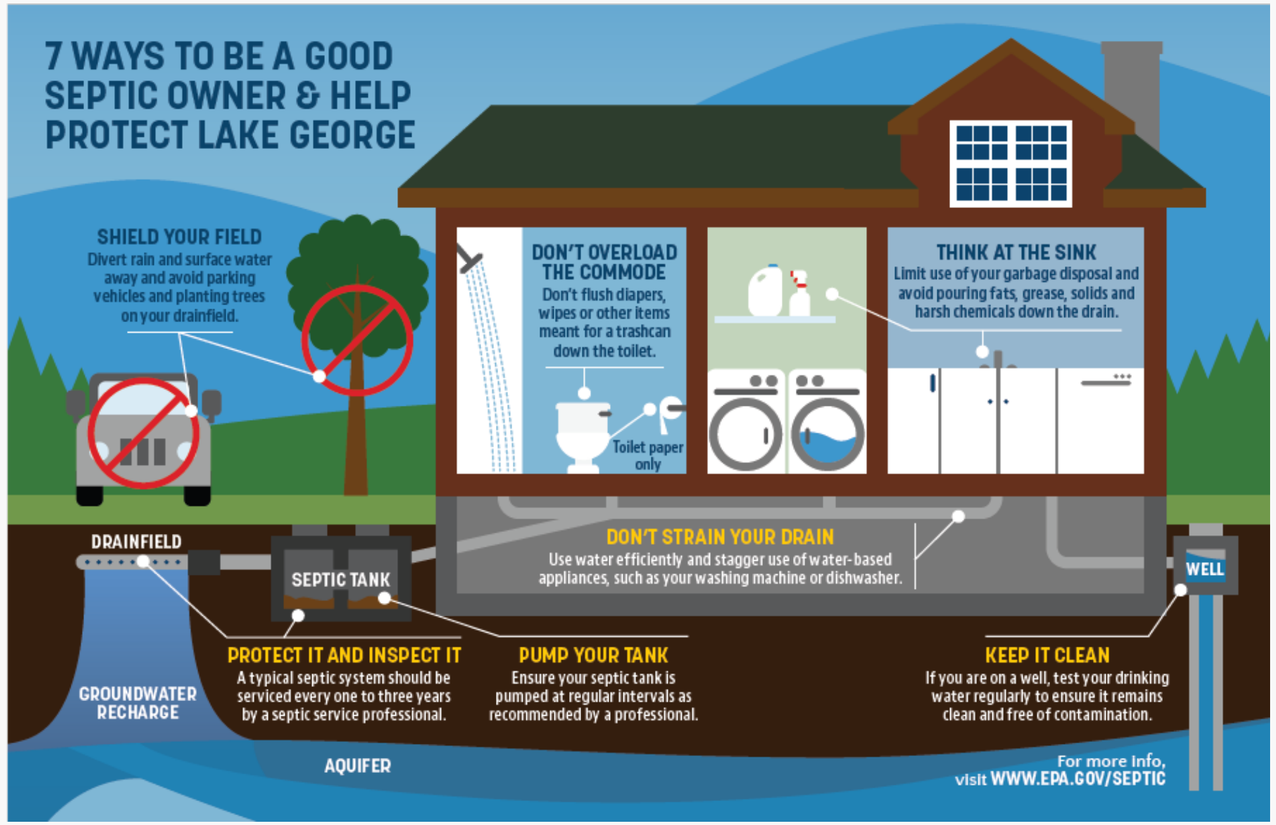
- Phosphorus - 1.05 lbs/yr
- Nitrogen - 1.13 lbs/yr
- Sediment - 3,720 lbs/yr



LCLGRPB Actions

LCLGRPB is assisting communities throughout the watershed to address water quality issues related to Non-Point Source Pollution:

- Septic Smart Campaign
- Septic Smart Expansion
- Bulwagga Bay Erosion Management Project
- Salt Reduction Programming- Warren & Washington Counties
- MS4 Support and program implementation



https://www.lclgrpb.org/educational-resources

Questions?

Contact Information

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- Sam Blake - sam.blake@lclgrpb.org

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