Lake Iroquois Association

LAKE IROQUOIS

- Surrounded by four towns: Williston, Hinesburg, Richmond, St. George
- Max depth: 36 feet
- Acres: 247
- Originally a smaller pond, dammed in 1867 to form its current size
- Public beach and public boat access at the north end
- 92 lakefront properties

LAKE IROQUOIS ASSOCIATION

- Founded in 2007
- An all-volunteer organization
- Faced two major problems:
  - High nutrient content along with sediment visibly washing into the lake
  - A large and spreading Eurasian watermilfoil infestation

Silt flowing into lake

PROJECTS TO REDUCE PHOSPHORUS AND RUNOFF

- Mapping tributaries
- Received grant to participate in the LaRosa Tributary Sampling Project
- Grants for engineering plan to remediate west shore tributaries and for implementation of the plan
- Work on Shadow Lane to create turnouts to reduce runoff
- Grant to create Pine Shore rain garden
- With LIRD, received design and implementation grants to address the public beach erosion problem and to construct a rain garden
- LIA volunteers worked with Amy Picotte to re-vegetate the shoreline at the fishing access
- Began publication of the property owner's manual containing BMPs and other info for shoreline property owners
- Outreach and education to lakefront property owners on the Lake Wise program
- Stream Remediation and Erosion Control Project (ERP Grant)

Catch basin off Pond Road

Pine Shore Rain Garden

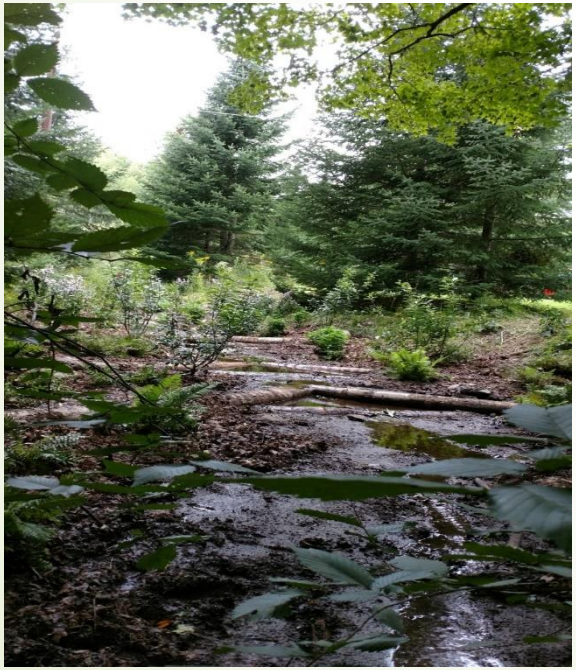
Graded Stream Bank with new plantings

Beach Erosion

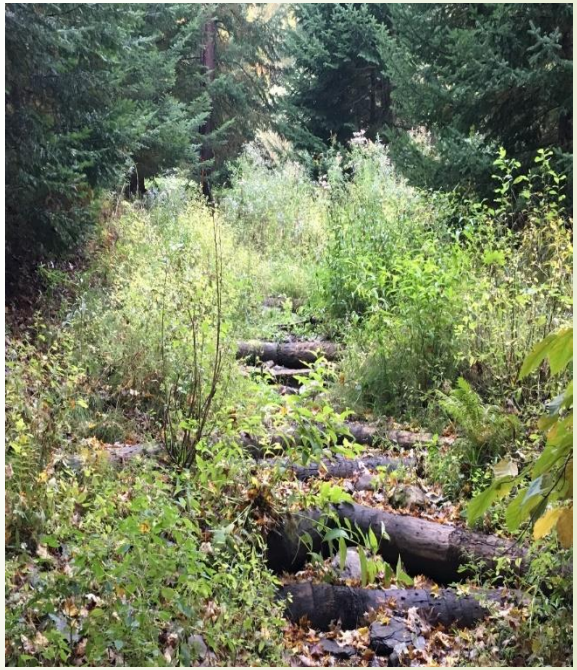
Beach Rain Garden

Stream Remediation and Erosion Control Project (2017-2018)

August 2017



October 2018



2014: Steve and Lessie Reiman receive the first Lake Iroquois Lake Wise Award recipient (with Amy Picotte, formerly with the VT DEC).

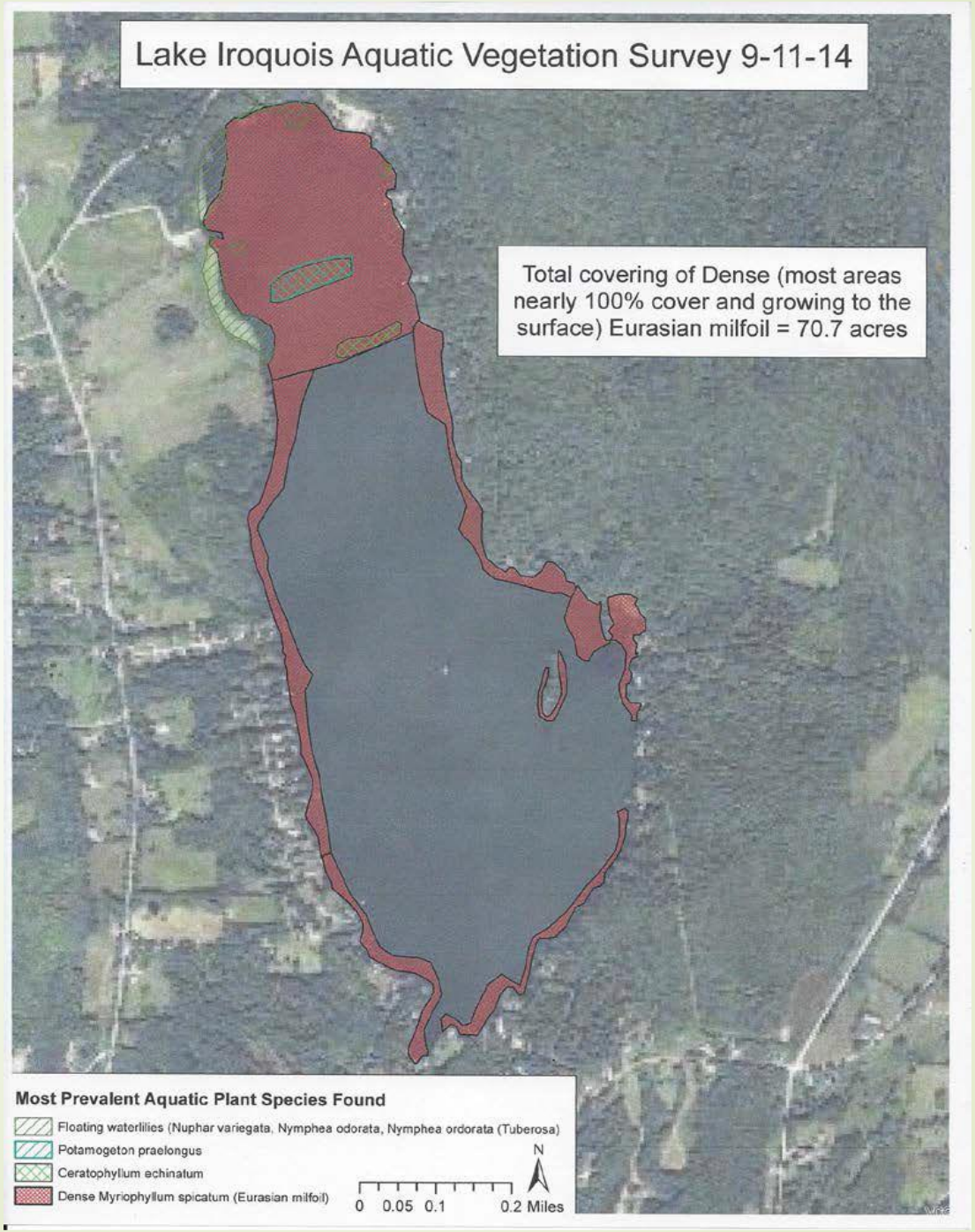
Planting a buffer

Buffer Planting at the fishing access

PROJECTS TO ADDRESS EURASIAN WATERMILFOIL

- Greeter Program (begun in 2009) with boat wash added in 2017
- Aquatic plant surveys beginning in 2014 to quantify the problem
- Channel markers placed for boats
- Permit applications: benthic mats, Diver-Assisted Suction Harvesting (DASH), herbicide
- Development of integrated pest management plan
- Development of Five-Year Lake Management Plan
- Education & outreach to all lake users, town selectboards, town conservation commissions, town meetings
- Lots and lots of fundraising


FISHERMAN
VT 6211 H


Lake Iroquois Aquatic Vegetation Survey 9-11-14
Total covering of Dense (most areas nearly 100% cover and growing to the surface) Eurasian milfoil = 70.7 acres
Most Prevalent Aquatic Plant Species Found
Floating waterlilies (Nuphar variegata, Nymphea odorata, Nymphea ordorata (Tuberosa)
Potamogeton praelongus
Ceratophyllum echinatum
Dense Myriophyllum spicatum (Eurasian milfoil)
N
0 0.05 0.1 0.2 Miles

OTHER ACTIVITIES: EDUCATION, FUNDRAISING, & FUN

- Website, Facebook, newsletters, email list
- Property owners' manual
- Garden tours
- Annual meetings and picnics
- Beer for Buffers,
- Birds and Buffers
- Wine Tastings
- Progressive diners
- Public House dinners
- Road associations meetings
- Selectboard & conservation commission presentations
- Press releases and articles in local media
- Public meetings

THE RESULTS:

GREETER PROGRAM & HOT WASH STATION

- Objective: Prevent aquatic invasive species from entering or leaving the lake by…
- Educating watercraft users on Aquatic Invasive Species through communication and distribution of educational pamphlets
- Use of hot wash station to clean watercraft
  - 2019: 912 watercraft inspected
  - 2020: 1,594 watercraft inspected
  - 2021: 1,481 watercraft inspected
  - 2022: 2,474 watercraft inspected

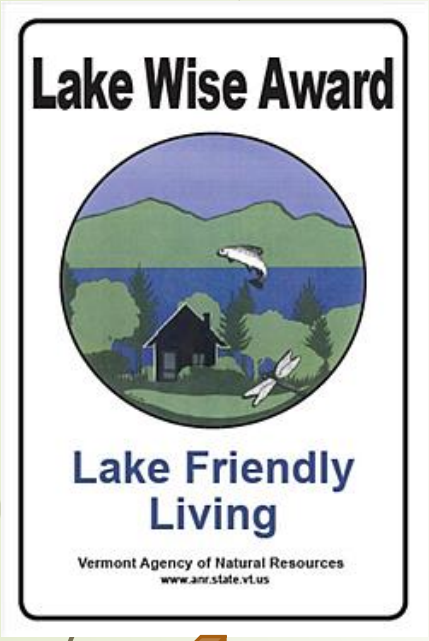
Partially supported by an Aquatic Nuisance Control grant from VT DEC

CONSERVATION

Vermont Center for Ecostudies Loon Restoration Project

- Another successful nesting year for loon pair 2018-2022
- Association maintains loon nesting platform and signs warning of loon nesting activity
- Loon activity reports recorded and submitted to VCE

LAKE WISE AWARDS



- VT DEC-sponsored program that encourages landowner improvement of shoreline buffers
- 8 additional shoreline property owners awarded in 2022 for 14 total lake wide
- 15% of total lake properties awarded achieves Lake Wise Gold status

  (14 out of 92 total properties)

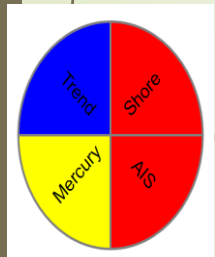
Summer 2018

Summer 2022

Highly Significant Decrease in Phosphorus Levels Continues

IROQUOIS - data through 2020

Learn How Lakes Are Scored



Lake Area:
247 acres

Basin Lake Area Ratio:
10

Max Depth:
11.3 meters

Mean Spring TP:
28.2 ug/L

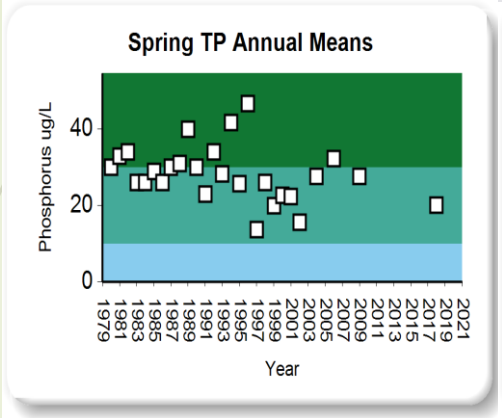
Mean Summer TP:
25 ug/L

Mean Summer Chla:
10.7 ug/L

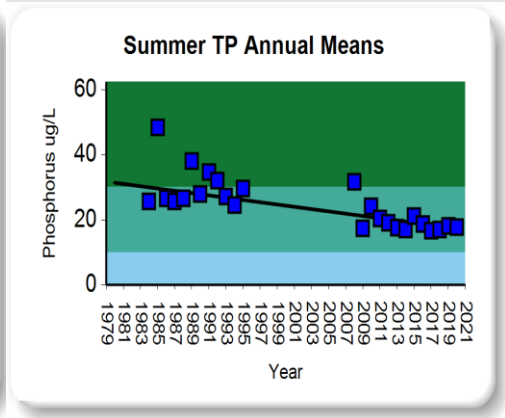
Mean Summer Secchi:
3.8 meters

Hypereutrophic
Eutrophic
Mesotrophic
Oligotrophic

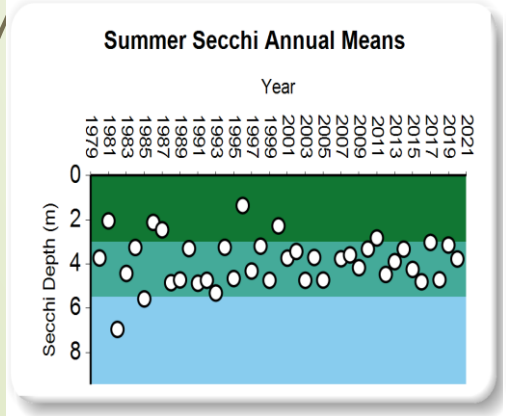
Spring TP Trend: p = 0.0571 | CV = 26
Stable



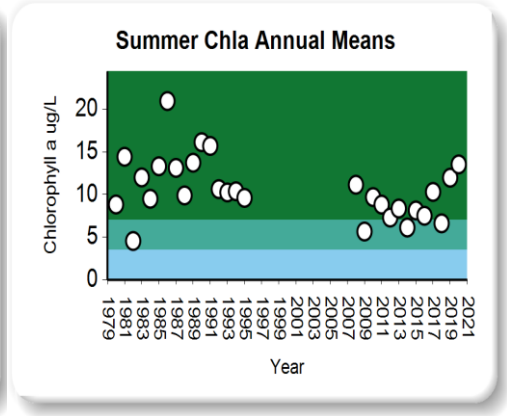
Summer TP Trend: p = 0.0001 | CV = 31
Highly significantly decreasing



Summer Secchi Trend: p = 0.5744 | CV = 28
Stable



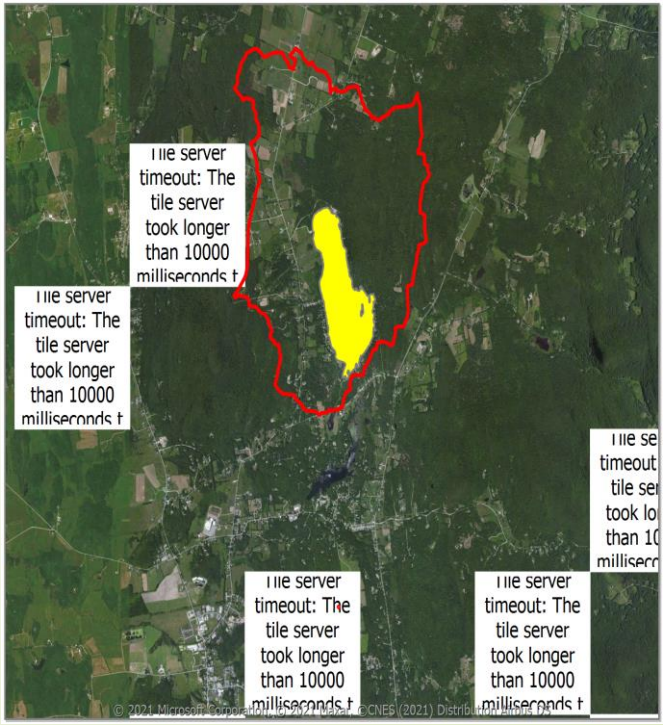
Summer Chla Trend: p = 0.1052 | CV = 33
Stable



Stresses / Impairments

Stressed -- Phosphorus

Trend Score:	**Good**
WQ Standards Status:	**Stressed**
Watershed Score:	**Highly Disturbed**



NOW WHAT?

CONTINUING AND NEW PROJECTS

- Expand the greeter program to operate more days and longer hours
- Continue tributary sampling
- Lay monitoring
- Vermont Invasive Patrollers
- Cyanobacteria monitoring
- Loon nesting platform and Loon Watch
- Annual plant surveys
- Monitoring (and hand pulling) milfoil
- DASH, benthic mats, herbicide if needed
- Continue work to increase number of Lake Wise awards
- Fundraising and grant writing, especially for AIS prevention, in light of state funding reductions.

OUTREACH & EDUCATION

- **LIA Website:**
  https://www.lakeiroquois.org

- **LIA Newsletter:**
  https://www.lakeiroquois.org/news/newsletters

- **Lake Shore Property Owner's Manual:**
  https://www.lakeiroquois.org/water/shoreline-health

- **Lake Iroquois Management Plan:**
  https://www.lakeiroquois.org/fileadmin/files/Annual_Reports/Plans/Lake_Iroquois_Association_Management_Plan_2020-2025.pdf?1d5658947a04f6a0033818d1a9a3dbb48abaff26

ICE-OUT CHALLENGE

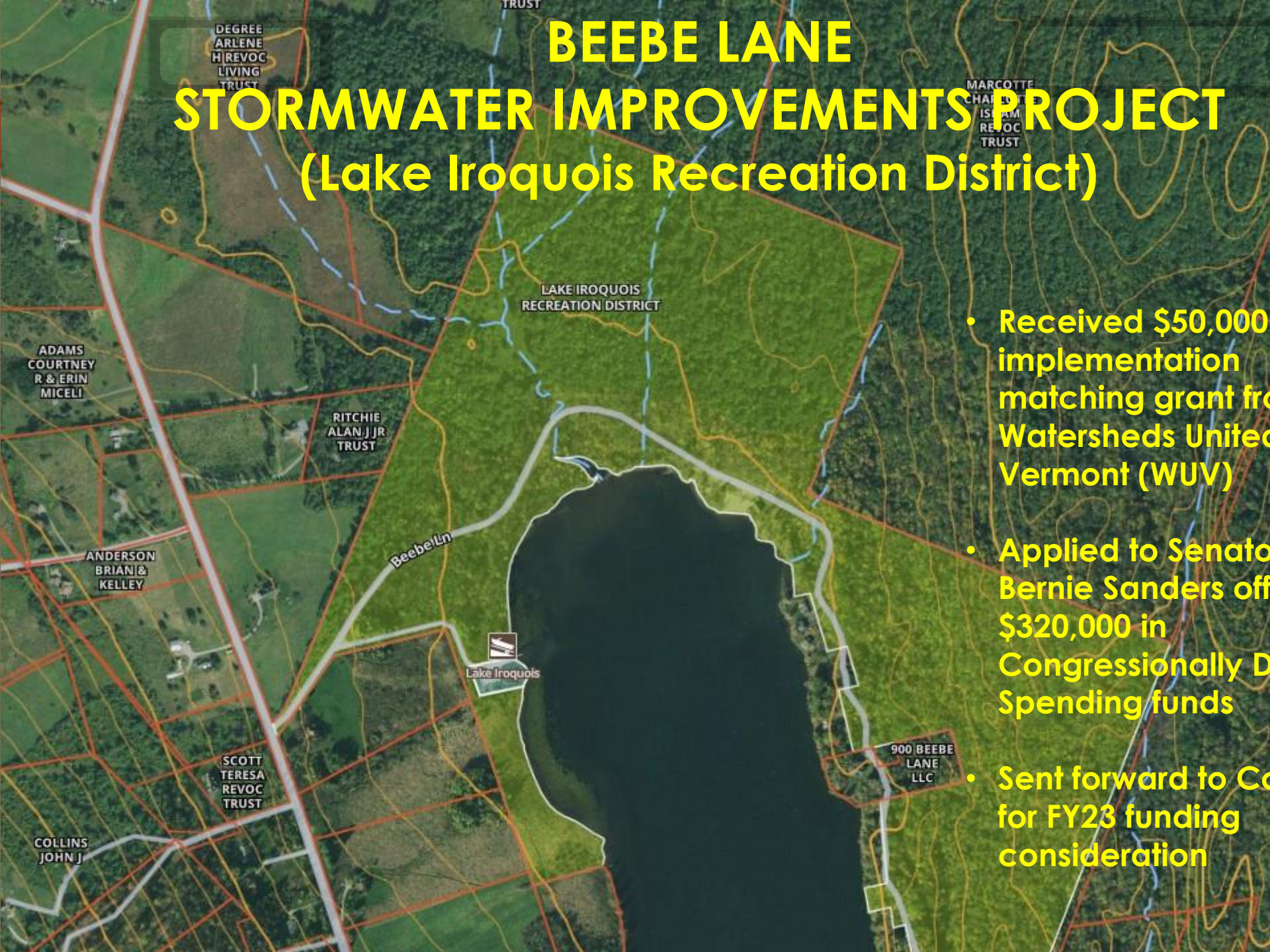
- Held 2nd Annual Ice-Out Contest January-March 2022
- Participants guess the date and time when a concrete block and pallet will break through the ice on Lake Iroquois, Vermont

WATERSHED ACTION PLAN GRANT

- Partnership with the Winooski Natural Resources Conservation District & Lewis Creek Association
- Purpose is to assess Lake Iroquois and Patrick Brook watershed for problem areas
- Selected engineering firm SLR
- Quality Assurance Project Plan near final followed by field surveys

Grant funded by the Lake Champlain Basin Program

BEEBE LANE STORMWATER IMPROVEMENTS PROJECT (Lake Iroquois Recreation District)



- Received $50,000 implementation matching grant fr Watersheds Unite Vermont (WUV)
- Applied to Senato Bernie Sanders off $320,000 in Congressionally D Spending funds
- Sent forward to C for FY23 funding consideration