

WE LOVE OUR WATERSHEDS SPOTLIGHT ON LONG LAKE

A PRESENTATION FOR THE LONG LAKE ASSOCIATION ANNUAL MEETING AND GET-TOGETHER AUGUST 11, 2023



Hello! I'm Caitlin Stewart, and I'm glad you are here today!!





highlighted in different colors.

St. Lawrence River Watershed Revitalization Plan

PURPOSE

- NYS DOS local waterfront revitalization program framework
 - Document current conditions and • trends
 - Engage the community to articulate • their vision and goals for the future
 - Identify challenges and opportunities • in resource management and community development
 - Define specific recommended actions • to achieve the desired future
- WRP approved by DOS in 2020

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https://fcswcd.org/partnerships/stlawrence-river-watershed-partnershipslrwp/



PLANNING PROCESS AND PARTNERS

- SWCDs: Franklin, St. Lawrence, Jefferson, Lewis, Herkimer, Hamilton, Essex, and Clinton
- St. Lawrence River Watershed Advisory Committee
- Community outreach

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- Public workshops and meeting ٠
- Fact sheets, surveys, website
- Elicit stakeholder input and concerns •
- Newspapers, area businesses, marinas, lake associations, fish and game clubs, supervisors, highway superintendents

St. Lawrence River Watershed Revitalization Plan



St. Lawrence River Watershed Revitalization Plan

VISION & GOALS

• Stakeholder vision

"The St. Lawrence River watershed is a sustainable source of clean water, recreation, renewable energy, transportation, and timber and food production."

- Stakeholder goals
 - Protect and enhance native plant and animal habitat
 - Adapt to climate change
 - Ensure that communities retain their essential character while providing economic opportunity
 - Resolve issues of legacy contamination and atmospheric deposition
 - Increase awareness of how human actions affect the ecosystem
 - Prepare for emerging issues and threats



IMPLEMENTATION STRATEGY FOR WATERSHED REVITALIZATION

- Ag practices and management
- Floodplain and stormwater management
- Forest management
- Invasive species management
- Infrastructure and development
- Water and wastewater management
- Water quality research and monitoring
- Watershed planning, management, and outreach



LONG LAKE PROJECTS

- Septic system inspection program, maintenance educate
- Manage aquatic vegetation
- HAB monitoring
- Stormwater control practices at town hall
- Long lake boat wash station, extend lake steward program, support Lake Eaton, South Pond, and Forked Lake
- Jennings and Shaw Pond dam replacement
- Sagamore culvert replacements
- STEM program, watershed science and associated teacher training
- Invasive species prevention, assessment, mitigation and education
- Weather and gauging stations



FUNDING

- Projects and priorities listed in an WRP are more likely to receive local, state, and federal grants or be funded by other opportunities
- WRPs = accredited



UNCUS ROAD **CULVERT** REPLACEMENT

- Undersized, old, rusted out
- Public safety, infrastructure integrity issues
- Replace 2-foot round culvert with a 54-inch squash culvert D
- HCSWCD sized culvert to DEC and Army Corps regs
- HCSWCD purchased culvert, applied for permits, hydroseeded streambanks, oversaw project
- Town of Long Lake Highway Department purchased and hauled gravel and road fill
- Town of Inlet Highway Department provided excavator and operator
- Protects 60 ft2 of stream bank, prevents 0.25 tons of sediment loss per year
- Allows for aquatic passage

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10,855.79 (3,000 = town, 7,855.79 = hcswcd)

St. Lawrence River Watershed Revitalization Plan



NEXT STEPS

- Seek funding for implementation
- Projects listed in WRP are more likely to receive funding



Lake Monitoring







Field data – weather, surface, wind, air temp, transparency

Profile – pH, conductivity, DO, chlorophyll

Analytes – Chl-a, Alk, Ca, DOC, P, N, Cl-





High flushing rate

Rapid water replacement













SODIUM AND CHLORIDE

Monitoring began in 2013

Lakes with paved roads experience salt enrichment

2015 – 2017 average = 3.8 mg/L (CI-), 2.6 mg/L (Na) = road salt had a low impact on water chemistry



DISSOLVED OXYGEN CONTENT



Proportion of monthly sampling trips where the bottom water of Long Lake (1 meter off bottom) was observed to be oxygenated (D.O. > 4.0 mg/L), experiencing noted depletion (< 4.0 mg/L), hypoxic (< 2.0 mg/L) or anoxic (< 0.5 mg/L). Data is from the period of 1993 to 2017.

DO DISCUSSION

Atmosphere

Lake sediments with organics = bacterial decomposition that consumes DO

Anthropogenic nutrients [↑] algal productivity, decomp, and DO loss

Hypoxia and anoxia may be a natural occurrence



HCSWCD RESPONSE

Assessed road wash-outs, culverts, bridges, stream channels. Damage was not significant on county or town roads.

Emergency Authorization from DEC – waiver procedural requirements to quickly respond to emergencies that immediately threaten life, health, property, natural resources

Met with Dept. of Homeland Security – determine if cost of damage meets FEMA thresholds

Met with engineering firms who assessed damage

Applying for DEC general permits for bridge repair and mitigation





HCSWCD RESPONSE

EA: Water Plant Road – installed 9 ft culvert for temporary passage because Town must access plant for back up water supply. NOT a permanent repair, culvert will be correctly sized in future.

EA: Shaw Brook residents – reinstall water lines and bridges

GP: Bridge repair and mitigation on North Point Road and access to Town's reservoir



NRCS EMERGENCY WATERSHED PROTECTION PROGRAM

Federal emergency recovery program that helps communities recover after a natural disaster strikes

Remove debris from streams, protect eroded streambanks, establish vegetation

Does not repair infrastructure

NRCS engineers assessed stream channel damage

Sponsoring municipality contributes 25% (dollars or in kind)





WHAT QUESTIONS DO YOU HAVE?

WORKS CITED

Laxson, C., Croote, L., Stewart, C., Regalado, S., And D. Kelting. 2019. The state of Hamilton County lakes: A 25-year perspective, 1993 – 2017. Paul smith's college Adirondack watershed institute.

WORKING TO MANAGE AND PROMOTE THE WISE USE OF NATURAL RESOURCES IN HAMILTON COUNTY SINCE 1965

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