

Honeoye Lake Watershed Task Force Newsletter

Fall 2013



Photograph: Bill Hershey

Tributaries bring the watershed to the lake. Stopping the inflow of sediment and nutrients to Honeoye Lake from the surrounding watershed is an effective way to minimize weed and algae growth in the lake.

Healing the watershed is the first step toward healing the lake. A householder with an overflowing bathtub would be well advised to turn off the faucet before beginning to bail water from the tub. Honeoye Lake Watershed Task Force is working to turn off the inflow of nutrients and heal the lake.

Honeoye Lake Watershed Task Force Chairman's Letter : Terry Gronwall

Our Fall Newsletter covers all of the projects launched in 2013 to help improve the water quality in Honeoye Lake and its watershed. The common focus for most of these Honeoye Lake Watershed Management Plan based projects is to implement Best Management Practices (BMP's) to reduce external sources of nutrients and sediments from reaching Honeoye Lake:

NYSDEC WQIP Grant Projects - Ontario County Soil and Water Conservation District (OCSWCD) in partnership with the Ontario County and Town of Canadice Highway Departments completed a NYSDEC WQIP Grant funded stream bank restoration project near Cratsley Road & County Roads 36 & 37 last July. The OCSWCD and HLWTF are currently preparing a new WQIP Round 11 Grant funding proposal to continue this type of work in the Honeoye Lake Watershed.

Princeton Hydro watershed's hydrologic and nutrient loading modeling and BMP's Project The Nature Conservancy (TNC) and the Honeoye Lake Watershed Task Force (HLWTF) have partnered to engage Princeton Hydro to refine the watershed's hydrologic and nutrient loading data thereby providing us with a better understanding of the sources and overall effects of baseflow and storm related loading on the water quality of the lake. The second key focus is on BMPs for the Inlet to determine the feasibility of restoring a portion of the natural wetlands.

Local Law Project – The Genesee Finger Lakes Regional Planning Council has been retained for the Honeoye Lake Local Law Project in partnership with Ontario County Planning Department.

Blue-green algae monitoring project - At the request of the NYSDEC blue-green algae samples were collected from Honeoye Lake mid-July through early October 2013 for testing for toxin levels. Samples were collected by OCSWCD and HLWTF staff. Toxin testing results were posted on the NYSDEC web site.

Lagoon and outlet sediment survey - Ontario County Solid and Water Conservation District completed a lagoon and outlet sediment survey in early October to measure how much sediment has accumulated.

Finger Lakes Institute Watercraft Stewards Grant Funded Program - The Watercraft Stewards were very effective at checking boats and trailers for invasive species at the Honeoye Lake Public Boat launch and in educating everyone they came in contact with about the importance of taking appropriate steps to control the spreading of invasive species.

Honeoye Valley Association launched a door-to-door educational outreach initiative – The HVA provided information to all lake residents on what they can do as good Lake Stewards to reduce nutrient and pesticide run-off into the Honeoye Lake. Funding was provided by a Ontario County Water Resources Council Grant.

These efforts to improve the Honeoye Lake and watershed water quality are a true partnership between The Nature Conservancy, New York State Department of Conservation, Ontario County Planning Department, Ontario County Soil and Water Conservation District, Finger Lakes Community College, Finger Lakes Institute, Honeoye Valley Association, the Towns of Richmond, Canadice, Bristol, South Bristol, and Naples and all lake users and residents.

We appreciate everyone's support! Contact me at: (585) 367-3000 or tgronwall@taurusgroupllc.com.
Terry Gronwall

**Clean Water/Clean Air Bond Act
Water Quality Improvement Project Grant
Road Drainage and Streambank Crossing Work**

Ontario County SWCD, Ontario County Highway Department and Ontario County Engineering cooperated to fulfill a Clean Water/Clean Air Bond Act Water Quality Improvement Project (WQIP) grant that will reduce sediment loading to Honeoye Lake. The Honeoye Lake Watershed Task Force was instrumental in obtaining the grant and prioritizing work that lead to these watershed protection best management practices.

Field surveys of streams, road banks and road ditches were conducted to identify sources and causes of soil erosion. Control practices were selected and designed to address the problem areas. Grading, installation of geotextile and rip rap, and seeding and mulching were accomplished and were found to be functioning properly.

Sediment entering water bodies creates mucky bottom areas, covers spawning grounds and carries with it nutrients that spur the growth of water plants. One pound of phosphorus supports the growth of 500 pounds of water plants/algae.

Location of Work Areas

	Jones Road	County Rd 36 @ Cratsley	County Rd 36 @Jersey Hill
Task	Stabilize 500' of road drainage ditch	Stabilize streambank 200'+/- of crossing	Stabilize streambank 250'+/- of crossing
	Estimation Method : R5	Estimation Method : R5	Estimation Method : R5
Benefit	Sediment Reduction 12.7 tons/year	Sediment Reduction 25.5 tons/year	Sediment Reduction 25.5 tons/year
Benefit	Phosphorous Reduction 1.4 lbs/year	Phosphorous Reduction 25.5 lbs year	Phosphorous Reduction 25.5 lbs year
Benefit	Nitrogen Reduction NA	Nitrogen Reduction 99.4 lbs/year	Nitrogen Reduction 99.4 lbs/year

Water Body Pollutant Load Reduction Estimates

Sediment (tons)	Phosphorus	Nitrogen
27 tons	51 lbs/year	198.8 lbs/year

Reduction of 51 lbs of phosphorus annually will avoid the growth of 27 tons of water plants/algae per year.

Before, During and After Views of Work Area: Cratsley Road

Photographs: P J Emerick, Terry Gronwall



Before: Erosion from road side runoff, culvert collapsing into ditch.



During: Reshaping drainage.



After: Seeded and mulched, grass is sprouting.



During: Ontario County DOT equipment and staff at work.



After: Rip-rap slows water, reduces erosive force, filters sediment from the water.

Round 11 Water Quality Improvement Project Grant Proposal

The Honeoye Lake Watershed Task Force and the Ontario County Soil and Water Conservation District have applied for grant funding under Round 11 of the Water Quality Improvement Project (WQIP) program. Ontario County Highway Department, Finger Lakes Community College, NYS DEC and the Towns of Richmond and Canadice would partner to accomplish the proposed tasks.

Funding for water quality improvements under this program is available for municipalities, Soil and Water Conservation Districts and non-profit organizations. The WQIP program is a competitive, reimbursement grant program funded primarily by the Environmental Protection Fund (EPF) and NY Works II for projects that reduce polluted runoff, improve water quality and restore habitat in New York's waterbodies.

The 21-page application requires a detailed information about the proposed project sites, pollutant reduction estimates, permits, easements, personnel and letters of intent from all cooperating municipalities and partners. The HLWTF /SWCD proposal includes:

- stream bank stabilization
- debris guards at two locations
- road bank stabilization and readjustment
- two sediment basins
- water control structure on existing sediment basin
- construction of vernal pools
- reworking of forestry practices on DEC land
- construction of a detention pond with a water control structure

Ontario County SWCD will secure the necessary permits for the work. The cooperating entities will contribute to the in-kind match necessary to secure funding.



Pictured: Debris guard for a culvert
HAAALA Industries

Watercraft Stewards



STOP AQUATIC HITCHHIKERS!

Prevent the transport of nuisance species.
Clean all recreational equipment.
www.ProtectYourWaters.net

If you spoke with some friendly college students or other volunteers at a boat launch this summer and were assisted in examining your craft for possible hitchhiking invasive species, you have been introduced to the Watercraft Steward Program. This program placed Watercraft Stewards at launches on all the Finger Lakes and on the southern shore of Lake Ontario this summer.

Finger Lakes Institute, located at Hobart and William Smith Colleges in Geneva, instituted the Watercraft Steward Program in an effort to educate boaters about aquatic invasive species issues and to help prevent the spread of these organisms by physically removing them from boats, trailers and vehicles.

The Stewards are trained to recognize (and retain samples of) aquatic plants and animals and are coached on how to meet the public at the boat launches.

Boaters are asked to respond to a quick survey to help FLI understand public perceptions, attitudes about and knowledge of invasive species. The survey also helps them understand the willingness of the public to engage in management actions such as transport laws that require boats to be inspected, cleaning stations at launches, the use of herbicides and other issues.

A separate research project was conducted that asked the public about their willingness to support invasive species management actions such as mandatory watercraft inspections, using cleaning stations at launches, transport laws, the use of herbicides, and other issues.

A program managed by

FINGER LAKES
INSTITUTE



HOBART AND WILLIAM SMITH COLLEGES

Contact us at flisteward@hws.edu

Onsite Wastewater Treatment (Septic) System Care and Maintenance Seminar

If your home has an onsite wastewater treatment (septic) system, proper maintenance is important to your own well-being as well as to that of your neighbors and Honeoye Lake.

Although a shoreline sewer district serves residences near Honeoye Lake, many homes in the watershed are not connected to the public sewer.

Onsite wastewater treatment systems are designed to treat sewage, not just dispose of it. The components of a system are few: a septic tank, distribution boxes and an absorption field (aka. leachfield or drainfield) of perforated pipes seated in gravel above suitable soils.

If the system is working properly, aerobic (oxygen-using) soil bacteria consume bacteria and pathogens contained in effluent water before it sinks to the groundwater table.

Nutrients (nitrogen and phosphorus) are not removed by septic systems – or by sewage treatment plants – but may be taken up by grass or shrubs if the effluent is discharged high enough in the soil.

Deeply buried absorption fields, seepage pits and cess pools disperse effluent into the soil below the level where aerobic bacteria live, actually functioning as injection wells rather than as treatment systems.

Groundwater in the watershed moves more slowly than surface water, but it is moving just as surely to the lake. It is vital that it does not carry sewage bacteria and nutrients with it.

Honeoye Lake Watershed Task Force will sponsor a public seminar on use and maintenance of onsite wastewater treatment systems in the spring of 2014.

The date, location and time will be announced. Bring your questions and concerns.

Don't Buy Septic Tank Additives

Advertisements for products that promise to eliminate or decrease the need for pumping out septic tanks are targeted to homeowners not connected to public sewers.

“SUPER” bacteria (whatever those may be), enzymes of mysterious descriptions, yeasts, de-greasers and solvents and other such products are found on shelves, marketed on the internet and advertised through the mail.

Please don't waste your money. No independent scientific tests – there have been many conducted by Cornell and other universities – have ever supported these claims.

About half the solids that settle to the bottom of a septic tank will be digested by the immense number of bacteria naturally present. The remainder of the solids, due to their chemical nature will never decompose. These must be pumped out periodically if the system is to work properly.

Putting more bacteria into a septic tank is akin to throwing a bucket of water into Honeoye Lake – it adds to the total, but not significantly.



Worse news: solvents sold to degrease or “descum” the tank may ruin your absorption field by sending scum into the soil and sealing off the soil pores. Scum does not hamper the functioning of a properly maintained septic tank and will be removed when it is pumped. **There is no substitute for maintenance. Septic tanks need to be pumped and inspected for structural integrity every 3-5 years.**

Honeoye Lake Lagoon and Outlet Survey

P J Emerick

The Ontario County Soil and Water Conservation District received funding earlier this year from the Ontario County Water Resources Council to re-assess the capacity of the Honeoye Lake outlet channel and lagoon area to determine how much sediment has accumulated since the initial survey in 2010.

When sediment accumulates, it reduces the capacity of the lagoon. The objective of this work is to make sure that the Honeoye Lake Outlet channel and lagoon are not impeding the water flow into the Honeoye Lake outlet creek.

The District partnered with the Cayuga County Soil & Water Conservation District to use a Leica Total Station survey instrument to take readings of the existing bottom.

Terry Gronwall provided his boat to transport the team into the lagoon and outlet channel area to take the necessary shots to develop a bottom profile.

Data obtained in the field on Tuesday, October 8, 2013, will be downloaded into a specialized software program and plotted to show the actual existing topography of the outlet channel and lagoon area including elevations.

This data will then be compared to the information from the 2010 survey to determine how much sediment has accumulated.

The results will be shared with the Towns of Richmond and Canadice, and the Honeoye Lake Watershed Task Force.

If the Towns and Task Force determine that dredging of the lagoon is needed, the Ontario County Soil and Water Conservation District will assist the Towns in obtaining the required permits from the NYS DEC and the Army Corps of Engineers.

Information from the completed survey will be shared in the Spring 2014 Honeoye Lake Watershed Task Force Newsletter.

Please contact P J Emerick (585) 396-1450 or ontswcd1@rochester.rr.com if you have questions about this project.

Photographs: Ed Jackson



Surveying the Lagoon



Local Laws Review

The Genesee Finger Lakes Regional Planning Council has been retained to complete the Honeoye Lake Local Law Project in partnership with the Ontario County Planning Department.

The project is funded by a grant received by the Town of Canadice on behalf of the watershed localities from the NYS Department of State.

The purpose of the project is to

1. Review the Town's planning and zoning laws as they relate to Honeoye Lake's water quality.
2. Undertake an in depth study of one topic or issue of each town's choosing and provide a 'ready to implement' product.
3. Prepare a work book for each town that will identify additional planning and zoning measures/next steps/etc. that would improve Honeoye Lake water quality.

An advisory committee consisting of a representative from each town, the Honeoye Lake Watershed Task Force, Finger Lakes Community College, and the Ontario County Soil and Water Conservation District will assist with keeping the project on track and communicating with their local boards.

The relationship of land use regulations to watershed and water quality protection has been amply demonstrated throughout New York State and the nation.

Aligning land use regulations, land use planning and watershed management goals will help insure the health of the watershed's resources.

Comprehensive planning for the resources within the entire watershed, with participation and commitment from all municipalities in the watershed, is critical to protecting the health of Honeoye Lake.

Princeton Hydro's Watershed Hydrologic and Nutrient Loading Modeling and Inlet BMPs

The Nature Conservancy (TNC) and the Honeoye Lake Watershed Task Force (HLWTF) have partnered to engage Princeton Hydro to refine the watershed's hydrologic and nutrient loading data thereby providing a better understanding of the sources and overall effects of baseflow and storm related loading on the water quality of the lake.

More refined and detailed hydrologic and pollutant loading data will enable identification and targeting of the primary sub-watersheds that require the greatest load control, and evaluate the feasibility of managing these loads.



This will aid in selecting, prioritizing and implementing nutrient load management efforts, ensuring restoration funding is directed to the implementation of projects having the greatest overall benefit to the long-term management of the lake.

Another key focus is on BMPs for the Inlet to determine the feasibility of restoring a portion of the natural wetlands to remove sediments and nutrients, enhance wildlife habitat, and create recreational opportunities for the public. This will be featured in the Spring HLWTF Newsletter.

Photograph: Terry Gronwall: Honeoye Lake Inlet Princeton Hydro evaluating soil suitability for wetlands restoration.

Stream Sampling and Monitoring

Monitoring the tributaries to Honeoye Lake is an ongoing task. A large base of information about the streams and direct drainages has been accumulated by volunteers and consultants in prior years and continues with the activities of Ontario County SWCD.

Thirty-five streams and countless direct drainages are tributaries to Honeoye Lake: the majority are small, intermittent or ephemeral. In total there are ten subwatersheds, but only four major tributaries draining to the lake: Honeoye Inlet, Briggs Gully, Bray Gully, and Affolter Creek. As could be expected, the larger subwatersheds generate the bulk of the lake's nutrient and sediment load.

Honeoye Inlet is by far the largest of the tributaries, draining 43% of the total Honeoye Lake Watershed. It is also more complex than the other streams, being branched and passing through an 800-acre wetland on its way to the lake.

Because of the topography, streams oriented east-west are of higher gradient (steeper). Higher gradient streams develop greater erosive and transporting energy.

During the spring, soils tend to be saturated and groundwater elevations are close to the surface; creating a greater probability for runoff from even non-developed, wooded land. Winter snow and ice accumulation in the hills around the lake brings a strong pulse of runoff to the lake during the early spring snow melt event each year.

Of concern are the loadings of Total Nitrogen, Phosphorus and Suspended Solids carried by runoff water from the tributaries.

Nutrients and solids accumulated in streams and drainages are flushed into the lake during periods of high flow. Sampling to find sources of high nutrients can supply information necessary to stop these sources from polluting the lake.



Bray Gully
Photograph: Bill Hershey