Erie County
Soil & Water Conservation District

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FINAL REPORT

Contract Number C306472

LEWPA YEAR 3 EPF FY 2018

December 2020

Lake Erie Watershed Hydroseeding Initiative

Projects were completed in the spring and fall of 2019

LEWPA funds allocated through the hydroseeding program provided road ditch and post construction soil stabilization throughout the county. This helped stabilize 8.9 acres of roadside ditches, outlets, banks, slopes and other sensitive areas within the watershed. All hydroseeding projects have been monitored to ensure vegetation established and to verify that erosion hadn't occurred.

All the projects that were funded through LEWPA were hydroseeded upon completion of the project. Other areas that were hydroseeded included roadside ditches that had just been cleaned out by the local highway departments. Many of our local highway departments understand the importance of established vegetation in the roadside ditches. Grassed Waterways/Gully Stabilization typically has a lifespan of 4 years.

LEWPA Funds: $2,000

Local Leveraged Funds: $2,563.35

Annual Tons of Sediment Reduced	Annual Pounds of Phosphorous Reduced	Annual Pounds of Nitrogen Reduced	Lifespan Tons of Sediment Reduced	Lifespan Pounds of Phosphorous Reduced	Lifespan Pounds of Nitrogen Reduced
368	368	736	1,473	1,473	2,946

West Cazenovia Creek Restoration Project – Town of Colden

Completion Date: September 2020

LEWPA funded implementation of erosion and sediment control and riparian habitat improvement along the West Branch of Cazenovia Creek located in the Town of Colden. This section of stream has experienced years of damage from high flows and ice scour. LEWPA funding was matched with funds from the Town of Colden. Funds were utilized for contracting with a private contractor for bmp installation consisting of the placement of 325 linear feet of longitudinal peaked stone toe protection, installation of 4 rock stream barbs, installation of 60 linear feet of tree revetments and shaping of the stream bed and banks. Trees and shrubs to be installed along entire length of project to help improve riparian habitat.

The District provided technical assistance and planning to generate the project plans and secure all necessary permits. The area directly adjacent to the project site is a retired railroad that is in the process of being converted to the Erie Cattaraugus Rail Trail. Project goals achieved a reduction of sediments and phosphorus from entering the watershed, stabilized the existing private/public infrastructure, and improved riparian habitat through the installation of the riparian buffer. Streambank stabilization projects typically have a lifespan of 10 years.

LEWPA Funds: $20,000.00

Local Leveraged Funds: $19,390.43

Annual Tons of Sediment Reduced	Annual Pounds of Phosphorous Reduced	Annual Pounds of Nitrogen Reduced	Lifespan Tons of Sediment Reduced	Lifespan Pounds of Phosphorous Reduced	Lifespan Pounds of Nitrogen Reduced
72.7	61.8	123.5	727	618	1,235

Erie County Riparian Buffer Program

Projects were completed throughout the 2019/2020 season

LEWPA funds were used to implement the second year of the Erie County Riparian Buffer Program. The program targeted high priority streamside sites along various Erie County creeks and streams. The sites that were targeted had minimal to no adequate riparian vegetation and were often in conjunction with streambank stabilization projects. A total of 1,600 linear feet of riparian buffer was installed in LEWPA Year 3. Riparian plants installed were a variety of species including sycamore, red maple, red oak, river birch, eastern redbud, hybrid poplar, black cherry, blue spruce, red osier dogwood, ninebark, and elderberry.

The benefits of riparian buffer implementation include the filtration of sediments and nutrients, reduction of erosion and the effects of flooding, and the improvement of wildlife habitat.

LEWPA funds were matched with District funds. Riparian Buffer projects typically have a lifespan of 10 years.

LEWPA Funds: $1,000.00 ***Local Leveraged Funds: $1,102.41***

Top photos: Pitkin/Chester Road Buffalo Creek GLC Site

Bottom photos: West Cazenovia Creek Restoration Project, Year 3 LEWPA Project

Annual Tons of Sediment Reduced	Annual Pounds of Phosphorous Reduced	Annual Pounds of Nitrogen Reduced	Lifespan Tons of Sediment Reduced	Lifespan Pounds of Phosphorous Reduced	Lifespan Pounds of Nitrogen Reduced
40.3	65.5	124.5	403	655	1245

Buffalo Creek Streambank Stabilization Projects – Town of Wales

Completion Date: August 2020 (Pitkin/Chester Road) September 2020 (Joint Board M-R/ Simons)

LEWPA funds were used in conjunction with federal grant and local funds for the implementation of erosion and sediment control bmp's along Buffalo Creek in the Town of Wales. The three Buffalo Creek projects that were supplemented with LEWPA funding, the Pitkin/Chester Road and 2 sites upstream and downstream of Joint Board M-R site Simons property. All had moderate to severe erosion that was impacting the active agricultural fields located adjacent to the stream. This ongoing erosion was responsible for heavy sediment inputs into the stream and was also exacerbating the loss of the existing riparian vegetation. The project involved the stabilization of approximately 1,045 linear feet of erosion utilizing rock riprap toe/bank protection, multiple rock vane/stream barbs and applicable bioengineering methods. A riparian buffer was reestablished from the top of the bank into the farm field portion of the site which was previous removed by the erosion.

The District provided technical assistance and planning to generate the project plans and secure all necessary permits. Project goals achieved a reduction of sediments and nutrients from entering the watershed, stabilized the active agricultural field at the top of bank, and improved riparian habitat through the installation of the riparian buffer. Streambank stabilization projects typically have a lifespan of 10 years.

LEWPA Funds: $20,000 ***Local Leveraged Funds: $70,305.50***

Pitkin/Chester Road Streambank Stabilization Project

Joint Board M-R/ Simons Streambank Stabilization Project

Annual Tons of Sediment Reduced	Annual Pounds of Phosphorous Reduced	Annual Pounds of Nitrogen Reduced	Lifespan Tons of Sediment Reduced	Lifespan Pounds of Phosphorous Reduced	Lifespan Pounds of Nitrogen Reduced
143	121.5	243	1,430	1,215	2,430

Tannery Brook Stormwater Diversion Project – Village of East Aurora

Completion Date: April 2020

LEWPA funding was used to support Buffalo Niagara Waterkeeper (BNW) in its implementation of the Tannery Brook Stormwater Diversion Project in the Village of East Aurora. BNW was able to provide 74 rain barrels to property owners in the Tannery Brook Watershed and conduct outreach with community members. 275 homeowners were contacted with an outreach letter explaining the opportunity to protect Tannery Brook and receive a free rain barrel.

Homeowners were made aware of the program through social media posts on Facebook, Twitter, and the Buffalo Niagara Waterkeeper website. A total of 6 social media posts about the project reached 11,935 people. To further engage homeowners, a rain barrel and outreach flyer were displayed at the Borderland music festival in East Aurora, directly promoting the program to over 300 people.

BNW also hosted two educational workshops to provide an opportunity for the interested homeowners to pick up their rain barrels. The workshops were held at the East Aurora Boys and Girls Club and were attended by a total of 55 participants.

BNW, in a partnership with the Village of East Aurora, designed a stencil with an impactful slogan; "No Dumping, Drains to Tannery Brook." BNW staff engaged with students at the East Aurora Middle School to paint storm drain stencils next to storm drains in the Tannery Brook Watershed. BNW staff led 60 students from the 5th, 6th, 7th, and 8th grades to paint stencils next to storm drains near the East Aurora Middle School.

LEWPA Funds: $15,150.OO ***Local Leveraged Funds: $1,294.14***

Storm Drain Stenciling in the Village of East Aurora.

Students from East Aurora Elementary School assist with Storm Drain Stenciling

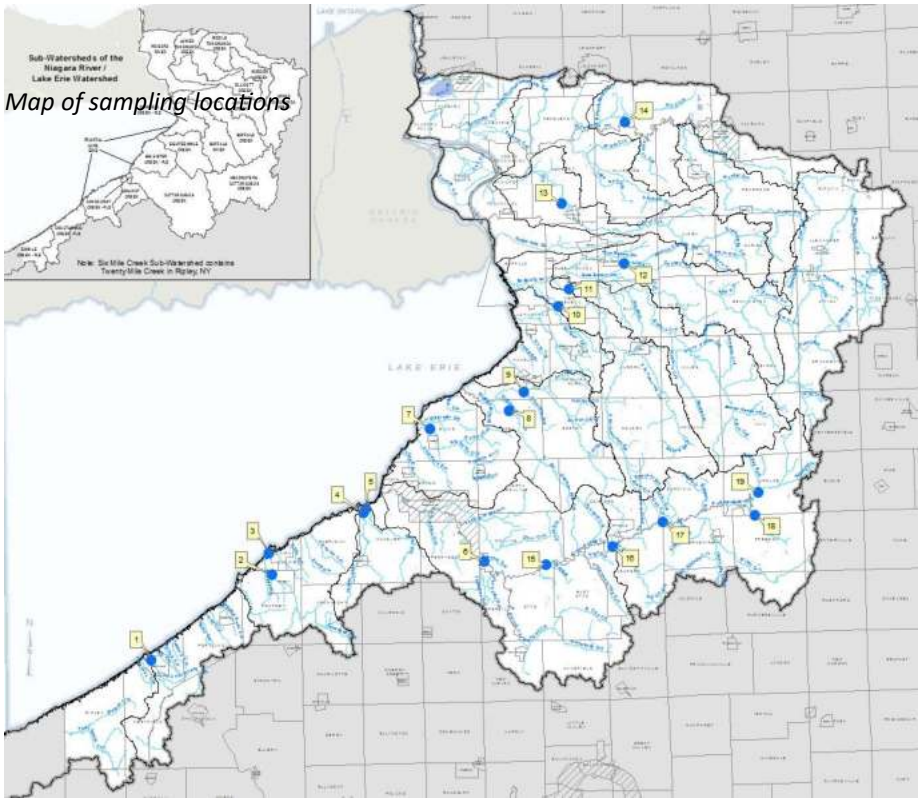
Rain Barrels Distributed	Storm Drains Stenciled	Attendees present at two workshops	Total number of people who received outreach
74	7	55	12,235

Water Quality Monitoring Project

The NYS Department of Environmental Conservation contracted with the US Geological Survey (USGS) to conduct baseline water quality monitoring in the Lake Erie Watershed. This baseline monitoring will include monthly sampling for nutrients and sediments in 19 locations across the watershed. The objective of this project is to collect baseline nutrient and sediment water quality data along with discharge hat can be used for watershed model development that will help focus further water quality improvement efforts in the basin, and aid in loading calculation and future regional target-setting efforts for nutrient reduction. Nineteen sites were selected by the NYSDEC including segments from the impaired waters list, input from LEWPA, and to cover a range of watershed size and land-use types. Sample collection will be conducted by the USGS and will include regularly scheduled monthly/seasonal sampling, event sampling, and discharge along with each sampling event. Also, continuous discharge data collection from 13 gages will be used in pollutant load calculations.

Pathogen Monitoring: The Districts and LEWPA worked with the NYS Department of Environmental Conservation, Division of Water staff to conduct a pathogen monitoring program that paralleled the USGS baseline water quality assurance plan reviewed and approved by the NYSDEC.

LEWPA Funds: $12,500.00 ***Local Leveraged Funds: $8,455.11***



Map of sampling locations

LEWPA Year 3 "Overview"

Projects	Totals
Lake Erie Watershed Hydroseeding Initiative	***($2,000.00)***
West Cazenovia Creek Restoration Project – Town of Colden	***($20,000.00)***
Erie County Riparian Buffer Program	***($1,000.00)***
Buffalo Creek Streambank Stabilization Projects—Town of Wales	***($20,000.00)***
Tannery Brook Stormwater Diversion Project—Village of East Aurora	***($15,150.00)***
Monitoring E. Coli / Pathogens	***($12,500.00)***
LEWPA Year 3 Grant Total	***$70,650.00***
Leveraged Funds Total	***$94,655.83***

Annual Tons of Sediment Reduced	Annual Pounds of Phosphorous Reduced	Annual Pounds of Nitrogen Reduced	Lifespan Tons of Sediment Reduced	Lifespan Pounds of Phosphorous Reduced	Lifespan Pounds of Nitrogen
624	616.8	1227	4,033	3,961	7,856

Rain Barrels Distributed	Storm Drains Stenciled	Attendees present at two workshops	Total number of people who received outreach
74	7	55	12,235