

Cayuga Lake Watershed Restoration and Protection Plan
Implementation Project

PROJECT PRIORITIZATION MATRIX

June 2022



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Cayuga Lake Watershed Ranked Best Management Practices Projects

PRIORITIZATION PROCESS

This project ranking is the result of a process carried out by the Cayuga Watershed Intermunicipal Organization (CWIO), working in partnership with the Town of Ithaca, the Central New York Regional Planning and Development Board, and the Cayuga Lake Watershed Network, funded by the New York State Department of State's Local Waterfront Revitalization Program.

In 2020, project request sheets were sent to municipal officials, Soil and Water Conservation Districts, highway departments, and planning departments, asking for ideas for projects in the watershed that would improve water quality in Cayuga Lake.

Thirty-one project ideas were received and considered for ranking. Of these, the 20 projects in the matrix above were selected to move to the prioritization stage (the unranked projects are discussed below). A Project Advisory Committee (PAC) met to review these projects. PAC members were drawn from municipal governments, Soil and Water Conservation Districts, local planning departments, water districts, health departments, watershed organizations, and state agencies.

Projects were reviewed and given a score based on the degree to which they are expected to improve water quality in the Cayuga Lake Watershed.

Most criteria consisted of a scale of zero to five, with zero indicating that a project would not be expected to meet a criterion and five indicating that a project would be expected to excel in a criterion.

Criteria used to develop these scores included:

- Pollutants addressed
- Cost vs. benefit
- Education and outreach benefits
- Local project support
- Long-term maintenance and liability
- Availability of matching funds
- Project effectiveness
- Public health benefits
- Readiness to proceed
- Severity of impacts, problems, or threat
- Technical quality
- Water quality benefits
- Past project performance and grant history
- Climate change benefits
- Project replicability

Each member of the PAC scored each project based on these criteria. The average of PAC members' scores was used to create the priority ranking in the final project matrix.

UPDATING THE LIST

This list is not intended to represent a static set of long-term priorities. It will be re-evaluated as needed. In 2022, CWIO will develop a Technical Advisory Committee (TAC) and hire a Watershed Manager. The TAC is expected to manage the process of adding, removing, and re-prioritizing watershed projects on an ongoing basis. The prioritization process used to generate the existing (2022) list may be amended as needed.

Additionally, as more is learned about specific projects, their size and scope may be adjusted; in some cases, small projects in the same geographic area may be combined, while it may be more appropriate to split large projects into individual phases. As projects are implemented, they will be removed from this priority list.

UNRANKED PROJECTS

Several of the projects that were submitted by municipalities and other stakeholders were not considered to be a good fit for the ranking process, which was designed and used (in most cases) for site specific projects. The following are valuable project ideas and may be pursued by CWIO in the form of policy and/or educational initiatives:

- Countywide Zoning Training (Tompkins County): Establish a training program for planning and zoning board members to support regulatory changes that better protect sensitive areas such as riparian corridors and steep slopes.
- Timber Harvest Training (Tompkins County): Timber harvesting training for municipalities, including examples of model local laws, examples from rural towns that regulate logging activities, Timber Harvesting BMPs for logging companies. This idea includes opportunities to partner with the Tompkins County Stormwater Coalition and the Chemung County Soil and Water Conservation District.
- Forestry and Silviculture (Town of Caroline): Establish a minor regulation requiring all landowners to inform the Town of all intended logging operations and to coordinate with Town plans; require the use of proper stormwater and erosion control measures; consider a possible requirement for owners to bond the project. (A regulation like this could be based on other existing town-wide regulations and potentially serve as a model for other Tompkins County communities.)

Three of the site-specific projects were considered to have too little information available to be appropriately ranked using the criteria available. As these ideas are explored further and developed as projects, they may be included in future iterations of the prioritized project list.

- Cayuga Inlet/Eddydale Farm Stand: Prevent further erosion of the Cayuga Inlet streambank by strengthening the riparian buffer which has been weakened in the past by agricultural practices and flooding damage.
- Enfield Elementary School: Streambank stabilization needed to address erosion at the culvert on Rte. 327 just south of Rt. 79 under Rt. 79
- Fall Creek/Virgil Creek Roadway Reconstruction in Cortland County: Assess unpaved roadways and under-performing drainage systems in the Fall Creek and Virgil Creek areas of Cortland County to identify reconstruction design needs, including proper grading and sloping, and associated road ditch stabilization needs. All remediation work to be completed using standard management practices and materials. (This project would not include road paving.)

Finally, three of the projects that were submitted have been completed:

- Septic Education and Maintenance (Fall Creek and Virgil Creek watersheds in western Cortland County): A total of 81 people attended the seven workshops held in Fall 2021 and Spring 2022, with additional sessions planned for Fall 2022. These workshops are funded by the NYS DEC's WQIP "Non-Point Source Pollution Reduction through Septic Education and Management" grant. Additional sessions are planned for Fall 2022. These workshops are targeted to the five Cortland County towns that are in the Cayuga Lake Watershed. Each participant, in addition to learning how septic systems function, receives a certificate good for the reimbursement of up to \$100 of any septic system maintenance activity (including but not limited to pumping and inspection).
- Middaugh Road Bed and Bank Erosion: Cross vein, side vein, and approximately 300 feet of stream bank armoring (rip rap) installed; willows planted along the stream side within the rip rap and up to bank full. Other flood tolerant woody vegetation planted in the floodplain for 250-300 feet of stream channel.
- VanRiper Conservation Area: Countermeasures installed to reduce streambank erosion along a deeply incised stream located on the VanRiper Conservation Area in the Town of Romulus. These improvements were the result of roadway improvements made to Route 89.

2022 Cayuga Lake Watershed Ranked Best Management Practices Projects

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Priority	Project	Description	Potential Responsible Organizations	Measures/Targets	Preliminary Cost Estimate	Potential Funding Sources	Project Timeframe				For More Information See IO Project List/Interactive Map Project #
							Short-Term (6 mos - 1 yr.)	Mid-Term (2 - 3 years)	Long-Term (3+ years)	Schedule Note	
1	Covert Salt Barn	Build a permanently covered salt barn with an impermeable base to store and mix salt and stone	Town of Covert	Reduce sediment and chloride loading to an unnamed tributary to Cayuga Lake	\$ 185,000	WQIP Salt Storage	✓				21
2	Cayuga Lake Watershed Rules and Regulations	Develop a community supported set of watershed rules and regulations leading to the development of a watershed inspector position	TBD	Lead entity identified; documented municipal and community support	\$100,000 - \$150,000	LWRP; private foundation grants			✓	This is a long term project that will take several years to complete; outside funding to support full development of watershed R&R is not guaranteed.	N/A
3	Ditch Management Remediation	Upgrade all road ditches located on steeply sloped areas adjacent to Cayuga Lake	Town of Ulysses Highway Department	Scope and scale determined; project area defined; Phase 1-consultant recommendations and design work completed; Phase 2 - community outreach program and local buy-in for project obtained; if needed, easements and land acquisitions obtained; ditch reconstruction, diversions, basins and other practices constructed and functioning.	\$20,000 engineering cost per ditch	GLRI - Sediment and Nutrient Reduction; WQIP - Non-Ag NPS Planning Grant; FEMA BRIC; WQIP Non-Ag NPS Planning; WQIP Non Ag NPS Abatement and Control - Streambank Shoreline Stabilization& Riparian Buffers.		✓		With funding, survey and design work could begin immediately. This is a multi-phased, multi-year project that may require multiple funding sources to complete.	12
4	South Hill Trail, Town of Ithaca	Streambank assessment required to support streambank stabilization and possible re-grading plan	City of Ithaca; Town of Ithaca	Private land owner agreement in place; reduced sediment loading to creek	\$20,000 for initial engineering assessment	GLRI Sediment and Nutrient Reduction; WQIP Non-Ag NPS Planning Grant ; WQIP Non Ag NPS Abatement and Control		✓		Access issues associated with site conditions impact implementation; added benefits to Dryden Reservoir in combination with Six-Mile Creek Vineyard project.	7
5	Salmon Creek Realignment, Town of Lansing	Realignment of approximately 1,650' of Salmon Creek due to lateral migration of Salmon Creek channel	Town of Lansing; Tompkins County SWCD	Upstream assessment completed; land owner permissions in place	\$600,000 (For full streambed realignment)	WQIP Non Ag NPS Planning; WQIP Non AG NPS Abatement and Control Shoreline Stabilization and Riparian Buffers; BRIC; EQIP		✓		Additional assessment of upstream conditions needed to develop full project design; upstream landowner permission needed; short term, on-site stabilization project may be warranted.	29

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6	Seven Mile Drive, Town of Ithaca	Streambank stabilization and revegetation with possible buffer installation	Town of Ithaca; Tompkins County SWCD	Reduced sediment loading; reduced maintenance/clean out of existing structures; possible land owner agreement for upstream work	\$25,000 (Cost estimate for immediate on-site restoration work only - no upstream assessment/survey)	GLRI Sediment and Nutrient Reduction; WQIP Non-Ag NPS Planning Grant: WQIP Non-Ag NPS Abatement and Control - Streambank Shoreline Stabilization& Riparian Buffers; BRIC.	✓			With funding, on-site work could begin immediately including upstream survey; completion in 6 months;	5
7	County Rd. 150 Streambank Erosion and Retention Basin, Town of Covert	Permitting, survey, design and installation of streambank restoration plan and installation of upstream detention basin	Seneca County SWCD; Seneca County Highway Department	Reduced flooding; improved infrastructure function; improved water quality; stabilized streambank; landowner permissions in place	\$350,000 - \$600,000	WQIP Non Ag NPS Planning Grant; WQIP Non Ag NPS Abatement and Control and/or; Streambank Shoreline Stabilization and Riparian Buffers; GLRI Sediment and Nutrient Reduction ; BridgeNY		✓		Conceptual only; landowner agreements needed; permitting can begin when funding is sought; with planning and permitting can be completed in one year; construction completed in year two.	24
8	Hackberry Lane/Coy Glen Erosion Control and Streambank Remediation	Streambank survey, remediation design, and implementation of BMPs to address streambank erosion	Town of Ithaca; Tompkins County SWCD	Landowner agreements in place; design complete; BMPS installed; reduced sediment loading and improved water quality	Unknown	WQIP Non Ag NPS planning Grant; WQIP non Ag NPS Abatement and Control Streambank Shoreline Stabilization and Riparian Buffers and/or GI Practices	✓			Landowner permission needs to be in place before this project can advance; with funding project could be completed in 6-months. (Additional benefits may be realized by tying this project with Woodgate Lane project)	4
9	West King Road	Installation of outlet protection and possible drainage velocity control retrofits	Town of Ithaca	Stormwater velocity discharge reduced; road infrastructure protected; sediment and nutrient loading reduced; water quality improved.	Unknown	GLRI Sediment and Nutrient Reduction; WQIP Non-Ag NPS Planning Grant: BRIC; WQIP Non-Ag NPS Abatement and Control - Streambank Shoreline Stabilization & Riparian Buffers.		✓		Access issue due to steep slopes and embankment may impact the feasibility of completing this project; multiple private owners involved	8

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10	Caroline Elementary School	Stream survey, streambank stabilization and in-stream stabilization design; signage and curriculum components	Tompkins County SWCD	Streambank stabilized; nutrient and sediment loading to 6 Mile Creek reduced; landowner permission to install riparian buffer	Unknown	WQIP Non Ag NPS Planning Grant; WQIP Non Ag/NPS Abatement and Control - Streambank Shoreline Stabilization and Riparian Buffers and/or GI Practices	✓			Design and permitting could advance immediately; construction completed in 3 - 6 months.	13
11	Lychuck Streambank Remediation	Install upstream cross veins to reduce velocity/dissipate energy	Tompkins County SWCD	Reduced streamflow velocity; reduced erosion; return to more natural flow patterns, stabilized streambank	\$100,000	WQIP Non Ag NPS Abatement and Control - Streambank Shoreline Stabilization and Riparian Buffers; GLRI Sediment and Nutrient Reduction	✓			Survey complete; with funding design and permitting work could begin (2-3 months), full project complete within one year.	14
12	County Rd. 150 Streambank/Roadbank Stabilization, Village of Interlaken	Design and construct a comprehensive stream and road bank stabilization project along approximately 300' of Lively Run	Seneca County SWCD; Seneca County Highway Department	Municipal and private property loss reduced; reduced sediment loading, improved water quality	\$350,000 - \$600,000	WQIP Non AG NPS Planning Grant (previous app denied); GLRI Sediment and Nutrient Reduction; BRIC; WQIP Non-Ag NPS Abatement and Control - Streambank Shoreline Stabilization& Riparian Buffers.		✓		One year for planning and design; Two years for implementation	23
13	Woodgate Lane	Streambank survey, drainage delineation, slope stabilization, and upstream mitigation projects to address potential municipal stormwater runoff causing erosion	Town of Ithaca; Tompkins County SWCD	Reduced erosion and subdimension; improved aquatic habitat and water quality; reduced nutrient loading to Cayuga Lake and tributaries.	Unknown	WQIP Non-Ag NPS Planning Grant; WQIP Non Ag NPS Abatement and Control Streambank Shoreline Stabilization and Riparian Buffers and/or GI Practices; GLRI Sediment and Nutrient Reduction	✓			Landowner permission is needed; with funding, survey work could begin immediately	4A
14	Salmon Creek Stabilization, Meyers Park	Install 350 feet of rip-rap for shoreline protection on Salmon Creek	Town of Lansing	Shoreline stabilized; sediment loading to Salmon Creek reduced	\$ 25,000	WQIP Non Ag NPS Streambank Shoreline Stabilization and Riparian Buffers	✓			Permit and design ready; with funding project could be completed in 6 weeks.	27
15	Trumbull's Corners Road	Design and construction of streambank stabilization practices to control erosion/bank failure	Tompkins County SWCD	Reduced sediment loading; improved aquatic habitat, reduced downstream control structure maintenance	Unknown	WQIP Non Ag NPS Planning Grant; WQIP Non Ag NPS Abatement and Control - Streambank Shoreline Stabilization and Riparian Buffers; GLRI Sediment and Nutrient Reduction and /or Forest Restoration	✓			Stream survey completed; 3-6 months for survey update and design work	10

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16	Interlaken Detention Pond and Soil Stabilization/Streambank Restoration	Plan, design and construct a detention pond and install shoreline buffer to slow velocity and reduce downstream flooding on private property.	Interlaken Village	Streambank stabilized; reduced downstream flooding	Unknown	BRIC; WQIP Non Ag NPS Planning Grant; WQIP Non Ag NPS Abatement and Control Streambank Shoreline Stabilization and Riparian Buffers and/or GI Practices; GLRI Sediment and Nutrient Reduction		✓		Conceptual project at this point; unknowns include: feasibility of proposed location, hydrology modifications, and upstream conditions.	23A
17	Middaugh Farm	Integrated stream management project to address streambed and bank erosion and resulting loss of farmland	Tompkins County SWCD	Control structures installed; natural hydrology restored; reduced erosion and improved water quality and aquatic habitat	\$ 200,000	EQIP	✓				16
18	Campbell Meadow Park	Gravel clean out and streambank stabilization	Tompkins County SWCD; Dryden Town	Return to more natural hydrologic flow in Fall Creek; improved water quality; reduced erosion.	Unknown	WQIP Non Ag NPS Planning Grant; WQIP Non Ag NPS Abatement and Control		✓		Estimated full survey and design would take 3 - 6 months to complete.	20
19	Darling Road Outlet Protection and Stabilization	Reduce velocity of culvert discharge from Sheldrake Creek during storm events	Town of Lodi	Reduced streambank erosion	Unknown	FEMA (work in the right-of-way); WQIP Non AG NPS Program Abatement and Control - NPS Program		✓		The Town right of way extends 25' from the road centerline and includes the stream. Discussions with property owners needed.	22
20	Wyllie's/Brooktondale Rd	Streambank erosion control and stream alignment including installation of upstream and on-site cross veins, bank armoring and buffer planting	Tompkins County SWCD; Town of Caroline	Reduced erosion and loss of active farm field; return to more natural hydrologic flow	\$100,000 (Cost estimate subject to change depending on scale of upstream work required)	EQIP	✓			Full project requires permission from several private upstream landowners	17