

**Preliminary Information to Support Proposed Project Ideas for Addressing Water Quality and Habitat Protection and Restoration in the Cayuga Lake Watershed**

**PROPOSED PROJECT #12: Ditch Management Remediation Project – Town of Ulysses**

**Proposed Project Category: can address more than one issue**

**1. Stormwater management and erosion control**

**Does project relate to/advance any existing local, regional, watershed, or statewide plans? (i.e. municipal comprehensive plan, watershed plan, regional sustainability plan, NYS comprehensive invasive species management plan, etc.) Identify plan if known.**

- NYS DEC Harmful Algal Bloom Action Plan for Cayuga Lake [https://www.dec.ny.gov/docs/water\\_pdf/cayugahabplan.pdf](https://www.dec.ny.gov/docs/water_pdf/cayugahabplan.pdf)
- Cayuga Lake Watershed Restoration and Protection Plan 2017 [http://www.cayugawatershed.org/documents/clwrpp\\_2017.pdf](http://www.cayugawatershed.org/documents/clwrpp_2017.pdf)
- Tompkins County Water Quality Strategy 2019-2021 [https://tompkinscountyny.gov/files2/planning/water-resources/WQS%202019-2021%20Final%20\\_11-20-18.pdf](https://tompkinscountyny.gov/files2/planning/water-resources/WQS%202019-2021%20Final%20_11-20-18.pdf)
- Tompkins County Comprehensive Plan <https://tompkinscountyny.gov/planning/comprehensive-plan>
- Town of Ulysses Comprehensive Plan <https://www.ulysses.ny.us/documents/documents-cp/>
- A Model Proposal for Re-Plumbing Roadside Ditches to Reduce Water Pollution in the Cayuga Lake Watershed – Case Study (2017); Rebecca Schneider (team leader, Sustainable Water Resources graduate class, NTRES 6240), Dept of Natural Resources, Cornell University.
- Tompkins County Conservation Strategy [https://tompkinscountyny.gov/files2/planning/Natural\\_Agriculture/Final%20DRAFT%20Conservation%20Strategy%2008-28-12.pdf](https://tompkinscountyny.gov/files2/planning/Natural_Agriculture/Final%20DRAFT%20Conservation%20Strategy%2008-28-12.pdf)
- Cleaner Greener Southern Tier Sustainability Plan <https://tompkinscountyny.gov/files2/planning/Sustainability/FINAL%20CGST%20Regional%20Sustainability%20Plan%205-22-13.pdf>
- New York State Local Waterfront Revitalization Program: Cayuga Lake Waterfront Plan. <https://tompkinscountyny.gov/files2/planning/water-resources/LWRP%202004%20with%20maps.pdf>.
- EPA Stormwater Phase II requirements for small MS4's; requires development and implementation of a stormwater management program with minimum control measures to achieve significant reductions of pollutants discharged into receiving water bodies (in this case, Cayuga Lake).

**Proposed Project Location:** *Please be as specific as possible.*

Ditches for roads within the Town of Ulysses that connect to NYS Route 89 that are on slopes of greater than 8% grade. These may include the following but would particularly focus on the first set of roads. If possible, this effort in the Town of Ulysses is in concert with Tompkins County Highway Department as some of these roads (noted below) are owned by the County.

Roads of particular focus:

- Glenwood Heights
- Perry City (County owned)

Other roads closely connected to Cayuga Lake on slopes greater than 8%

- Maplewood Road
- Garrett Road
- Houghton Road
- Agard Road
- Kraft Road (County owned)
- Gorge Road
- Rice Road
- Parts of Dubois Road (County owned)

**Landowner** *Identify private or public property owner(s) and contacts if known*

Roads are owned by both the Town of Ulysses and Tompkins County. Ditches along Town roads are in the right of way, and are therefore often owned by the adjacent landowner. An outreach effort to engage adjacent landowners on any project is an important component.

**Issue to be addressed:** Provide a description of the current site condition and issue(s) to be addressed by the proposed project i.e. streambank erosion, municipal stormwater runoff, riparian buffer needs, municipal ditching practices, etc.

Issues addressed by this project:

- Erosion reduction from roadside ditches on slopes over 8% along roads that are near Cayuga Lake in the Town of Ulysses.
- Reduction of damage caused by flash flooding in the area stated above
- Reduction of nutrients flowing into Cayuga Lake from the area stated above.

**Proposed Project or Action** Describe the proposed action and anticipated outcome

Roadside ditches are designed to keep water from accumulating on roads, thereby reducing road flooding and increasing safety. However, recent research indicates that roadside ditches also intercept stormwater runoff and associated contaminants from adjacent lands and hills and transport it rapidly to the nearby streams. Additionally, in rural landscapes, farmlands in particular may require on-site drainage in order for the land to be productive or useful, and have extensive tile drains which discharge into roadside ditches. The Town of Ulysses borders Cayuga Lake. Roadside ditches near the lake are steep in many areas

and often carry waters from agricultural lands above, and if Best Management Practices are not in place, those drained waters can be high in nutrients that have a negative effect on water quality in Cayuga Lake.

The Town of Ulysses would like to upgrade all ditches in the steep slopes area adjacent to Cayuga Lake to slow the flows of potentially nutrient rich waters, sediment, and other pollutants to the lake. These lands are also prone to flash flooding on the steep hillsides, especially with some of the extreme rain events of the recent past. This project would involve hiring a consultant and/or engineering firm to design and / or recommend remediation actions. Additionally, the town would require funds for materials to complete the recommended work. If purchase of land is recommended for sedimentation/stormwater ponds, funding for land acquisition would also be included. It is important ensure the best success to engage local landowners in addition to town and county highway staff and government. Where possible, best management practices for reducing runoff and erosion that are suitable for implementation by individual landowners will be identified for use as public education materials by the Town of Ulysses.

The outcome of this project would be reduced flow of nutrient rich waters, sediment, and other pollutants into Cayuga Lake and reduction in damage caused by flash flooding events.

**Is the proposed project or action based on standard practices typically employed for the issue at hand**  
*Yes/No. If no, what is the basis for recommending this project or action (ongoing research, successful pilot outside of watershed, etc.)*

Yes. Best Management Practices concerning ditches and water quality are available through the Cornell Local Roads program, Cooperative Extension, and Soil and Water Conservation Service. Additionally, information about improved practices becomes available with on-going research.

**Current Project Readiness** *With funding, could this project be undertaken immediately; has any preliminary site work been undertaken (studies completed, permits obtained, designs developed, etc.); does this project exist as a concept only at this time?*

To our knowledge, no special permitting is required for this project. The Ulysses Highway Department would be able to accomplish the recommended upgrades on its own over time. Part of the request is to hire an engineering firm and or consultant to provide the recommendations and design, and for materials and any land acquisition as needed for structures such as open channel swales, ponds, wetlands, or infiltration systems to slow stormwater movement and retain nutrients and sediment.

**Approximate Project Timeframe** *estimate if known*

This project can be scaled to either address one road at a time or a multiple of the above referenced high-priority roads, therefore the timeline would be reflected in the amount of funding.

**Approximate Cost** *estimate if known*

Again, because this project can be scaled, the cost will also vary starting at a minimum of \$30,000 and up to several hundred thousand dollars depending on the length and number of ditches to be remediated, and the level of intervention needed based on stormwater volume carried by the ditch and adjacent drainage area and land use / management.

**Potential Local Match Source**

The Town of Ulysses, and Tompkins County if it joins, would provide the labor, and machinery to upgrade the ditches within the town. The project costs the town is requesting would cover engineering costs, consultant fees if required, and materials to upgrade the ditches.

**Contact(s) for Additional Information** name, phone and e-mail of person recommending the project AND if different, the name, phone and e-mail for a project contact.

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