

## Ludlowville Stormwater Control Project Summary

The Hamlet of Ludlowville in Lansing, NY has experienced regular flooding over the last decade due to spring thaws and significant rainfall events that exceeded the capacity of the existing stormwater system. The existing drainage system repeatedly overtopped, allowing uncontained flows to travel overland causing damage to homes, basements, landscapes, driveways and other personal and public property. Flows conveyed by the existing stormwater system have additionally caused significant erosion and sediment loss in several areas. The ongoing streambank erosion has caused significant sediment load directly to Salmon Creek and ultimately Cayuga Lake.

In order to assess this flooding problem and propose solutions to mitigate recurring flooding, sediment loss and channel erosion in the Ludlowville area Tompkins County utilized \$240,000 in New York State Department of Environmental Conservation (NYSDEC) Water Quality Improvement Project (WQIP) funds to hire Barton & Loguidice, P.C., to develop a watershed based approach for analyzing the drainage conditions and addressing the flooding problem. This study helped identify the limits of the drainage system infrastructure and also to determine the sub-watershed that was contributing the highest flows to the hamlet. This existing conditions study helped the municipal partners to explore potential solutions.

B&L then developed a report that outlined design alternatives to address flooding and erosion concerns while also identifying preferred focus areas for the implementation of designs. Design alternatives included upstream detention, streambank stabilization, culvert modification and over bank protection. Reviewing options for likelihood of addressing stated concerns while also conforming to the project budget, the municipal team chose to pursue the development of a shallow upstream detention pond which had capacity of detaining approximately a million gallons of water.

B&L identified approximately half a dozen sites upland from Ludlowville where a pond could be constructed to have the desired detention benefits. Outreach was conducted to each of the landowners. After a great deal of effort, one owner, who was also the preferred location, agreed to terms to host the pond under easement by the County.

The County Planning Department worked with the owner to finalize terms, survey the site for the pond and finalize the pond engineering. Then, County Highway crews, along with support from the Town of Lansing Highway Department led site



preparation and pond construction with regular guidance from B&L. After several construction seasons, the pond was finalized and brought online early summer 2015. The pond is sized for a 50-year event. Based on this event the inflow was 30 cfs and outflow is 2.08 cfs. Since the detention pond has been brought "online" Ludlowville has not experienced any significant flooding events.

For more information on the project contact Scott D. Doyle, AICP at the Tompkins County Planning Department, 607-274-5560, [sdoyle@tompkins-co.org](mailto:sdoyle@tompkins-co.org).

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