Chautauqua Current No. 43

Chautauqua Lake & Watershed Management Alliance, Inc.
August 19, 2024

Figure 1. Pictured above is a stream stabilization project that was completed on Dutch Hollow Creek, at left is the bank in 2020 before construction. At right are members of the project team visiting the site in 2024.

DUTCH HOLLOW STREAM WORK, A LONG-TERM INVESTMENT

By Jay Young

Chautauqua Lake & Watershed Management Alliance

Streams and lakes exist on different scales of time than we do. They were here long before us, and they will be here long after us. Five or ten years may seem like a very long time when we think about many things in our day-to-day lives, but that's nothing compared to the lifetime of a stream. When we look at the scale of human projects aimed at improving the watershed, a decade of time can be a good place to start.

In 2012, on the heels of the lake's Watershed Management Plan, the County started looking at specific ways to improve two major creeks feeding Chautauqua Lake: Dutch Hollow Creek and Goose Creek. It took two years of work to produce a document to achieve this, an Erosion Diagnosis and Mitigation Engineering Study for these tributaries. With this study in hand the County was able to move forward with shovel-ready projects to help the lake and watershed. This began in 2015, when the County through its Department of Planning and Economic Development secured state grant awards to improve six different sections of streams around the lake, including Dutch Hollow and Goose. State funding was provided by the Environmental Protection Fund as administered by NYSDEC via the Water Quality Improvement Project program.

Fast forward to August of 2024. All six of these stream improvement projects have been completed after years of funding, engineering, administration, reporting, and construction. Project partners included County Watershed Coordinator Dave McCoy, the County's Soil & Water Conservation District, the Chautauqua Watershed Conservancy, the Alliance, and several contractors and engineers. Everything is done, but what do things look like now? Last week Alliance staff joined some of the original project engineers from Colliers Engineering and Design to get some answers to that question. Walking along the creek bed of Dutch Hollow, we looked at stream stabilizations that had been completed three years earlier. That can seem like a long time looking back on it, but again, three years is the blink of an eye to a natural system.

To the eyes of the engineers, the stabilizations on Dutch Hollow were holding up quite well. Streambanks that were eroding away the property of homeowners were still well-armored with rock, which means that less sediment and nutrients has been sent downstream to the lake. Even within the relatively small timeframe of a few years, streams can change significantly, often due to storms and debris from trees. The water never stops moving, after all. This constant change was made clear with our return to Dutch Hollow, as the project team recalled what the site looked like three or four or five years earlier.

Engineers and project managers can learn a lot from going back to visit old sites. They can learn lessons by noting how materials settle, move, and wear over time and use that experience to inform new work. Like streams, our best management practices change and evolve over time. Going back to these sites after everything has been completed gives an important sense of how long these projects take *and* how long they are going to be helping the lake and watershed. A decade of work led to this stabilization and five similar projects, but they will be working over a much longer time period to stop erosion and land loss. Ideally someone could visit these sites many years later and still see the positive impacts.

We all want certain things from the lake on a day-to-day basis, so it's understandable if we get lost in the short term sometimes. But we can view watershed work much more clearly when we zoom out a bit. The process of planning, engineering, funding, and building these projects is extensive, whether it is stream restoration, a stormwater management project, or a public sewer system. The positive impacts of this work on lake health are felt over even longer timescales.

Right now the Village of Lakewood is in the final stages of construction on its Grandview Stormwater Management Project. This work was first envisioned five years ago, and once completed, it will help control stormwater and reduce flooding in that area for decades and decades to come. The Alliance is also partnering on engineering studies at Ball Creek and Bemus Creek using state grants. Those will likely produce recommendations for more shovel-ready projects. All of these pieces are slowly but surely grinding away in the background, helping to maintain our watershed and improve lake health. One way to remind ourselves of that is by returning to look at what has been done in the past, because those efforts are still working towards our goals today.