

# We're building a better environment...

## Town of DeWitt Watershed Projects

The Town of DeWitt has two watersheds within its borders, the Ley Creek Watershed and the Butternut Creek Watershed. We are actively pursuing mitigation efforts with the Ley Creek Watershed; we're also building parks, greenspace, and a trail system throughout the Butternut Creek Watershed.

### What is a watershed?

A watershed is an area of land that "sheds" water – rainfall - into a specific body of water. The water then flows into successive bodies of water until it ends up in the ocean. The Ley Creek watershed encompasses several areas of DeWitt & East Syracuse, including: the Village of East Syracuse, the Park Hill, Parkwood, Franklin Park, Dunrovin, Collamer, and Genesee Hills neighborhoods. Ley Creek flows into Onondaga Lake which streams into the Seneca River, then into the Oswego River where it flows into Lake Ontario, on into the St. Lawrence Seaway, and finally into the Atlantic Ocean.

### Water do watersheds have to do with me?

How water flows across the topography – the land – of an area, directly impacts the effects of standing water and flooding, as well as the overall environment. So, even our local watersheds are integral to the "big picture" of the environment; the flooding and droughts we see all across the country due to climate change can be mitigated to some degree by how we manage our local watersheds.

DeWitt's Ley Creek watershed is very flat; that means water moves very slowly from our town to Onondaga Lake, which is why we have standing water and flooding issues. Historically, our area was swampland, logged off for agriculture, then later developed for residential and industrial uses. Swamps store large amounts of water in the spring, but dry as the summer progresses. Now, because the land is developed and most of the



*Ley Creek tree planting*



*Ley Creek Court St.*

watershed has been altered, heavy rains are routed through storm drains into our streams which have been hardened and channelized; as a result, the water has nowhere to go and instead floods low lying properties. Flooding is not only dangerous, it pollutes our waterways and can cause significant property damage. *Continued...*





The heavy rainfall of this past summer exacerbates the challenges of a very flat watershed, which amplifies the importance of taking measures to mitigate negative impacts. To see a map of the Ley Creek Watershed, go to: [www.townofdewitt.com/departments/supervisor/ley\\_creek\\_watershed.php](http://www.townofdewitt.com/departments/supervisor/ley_creek_watershed.php)

## **Ley Creek Watershed Project**

The objective of the Ley Creek Watershed Project is to abate standing water and flooding as much as possible in DeWitt. So, how are we doing that? Through a variety of methods such as tree planting, rain barrels, protective laws, French-drain storm drains, retention/detention ponds, and stream restoration including: de-channelization, hydrologic structures, substrate improvement, and wetland creation.

One simple but very effective way to mitigate standing water and flooding – as well as improve the health of our streams and support the organisms that live in streams – is to plant trees. Trees reduce run-off by “catching the rain on their leaves and stems,” taking up water through their roots, and through evapotranspiration, a process by which water is transferred from the soil and other surfaces to the atmosphere by evaporation and by the transpiration from plants. Essentially, trees act like a sponge and a mister; sucking water up through their roots and releasing or evaporating the water out through their leaves. A single, mature oak tree can transpire up to 40,000 gallons of water in a year.

Planting trees along Ley Creek and throughout the Ley Creek watershed will significantly help reduce standing water and flooding. Trees also help to clean polluted runoff from nearby residential and industrial development; trees help to shade a stream and thus reduce water temperature, thereby increasing the oxygen levels in the water. This supports fish and other aquatic organisms. Our warmer summers, due to climate change, need the help of trees to keep our streams living bodies of water.

## **A myriad of mitigation actions and legislation**

Another simple mitigation method is rain barrels; if 5,000 homes in our community each had two rain barrels collecting rain, approximately 100,000 gallons of rainwater would be prevented from filling storm drains and then flooding our streets during rain events. Moreover, rainwater is better and cheaper (it's free) for plants and gardens than chlorinated tap water.

The Town of DeWitt has also passed two laws to regulate development and reduce flooding in the Ley Creek watershed. The first law requires any post-development runoff from a 100-year storm to be less than or equal to a pre-development 10-year storm. The second law

establishes a protective 100' buffer strip around all federal and state regulated wetlands. Both laws promote green infrastructure and reduce flooding by requiring developers to hold storm waters on site. This – along with the Town's building and management of a storm water system of detention and retention ponds capable of storing large amounts of runoff – will help to mitigate flooding.

Another method to reduce stormwater runoff from flooding our surface waters is constructing French-drain storm sewers. The French-drain infiltrates storm waters into ground-waters, thereby reducing the overall amount of water reaching our surface waters. To date, French-drains have been constructed in parts of Franklin Park, Dunrovin, and Park Hill. *Continued...*



*Ley Creek Factory Ave.*



## Protecting our residents, businesses, wetlands and wildlife

A major initiative for mitigating flooding is the re-engineering and re-naturalization of Ley Creek itself. In my professional career, I head the Onondaga Environmental Institute (OEI). OEI is a small not-for-profit dedicated to research, education, planning, and restoration of the environment. OEI has worked to restore the Onondaga Lake Watershed, of which Ley Creek is included, for over 30 years. OEI has been able to secure grants to restore Ley Creek that benefit the residents and businesses of DeWitt, thereby saving DeWitt tax dollars. OEI has also developed a plan to build wetlands, instream structures, and improve bottom substrates at select sites.

These construction projects will not only improve water quality and enhance habitat for fish and wildlife, but will also provide increased water storage, hence mitigating flooding problems in several areas. Altogether, sixteen sites have been selected throughout Ley Creek's North and South branches and also Sanders Creek, a tributary to Ley Creek. Together, these 16 sites will provide greater water holding capacity, reduce flooding likelihood, and improve spawning and nursery grounds for fish such as Walleye and Northern Pike. However, it will take several years – and millions of grant dollars – to implement the entire plan.



*Ley Creek clean-up crew*

## Funding Sources

Funding sources for current projects include the *NYSDEC Trees for Tributaries Program* and the *NYSDEC Water Quality Improvement Program*. To date, we have planted some 100 trees along Ley Creek in the Ridings Road area. Wetland construction and tree planting efforts are continuing this fall of 2021 and into 2022; we are planting trees along Ley Creek and improving stream habitat for vitally important fish such as the Northern Pike, a fish species that spends at least part of its life in Ley Creek and needs clean, well-shaded water to survive.

## Here's how you can help...

In the spring of 2022, we will also be planting a few hundred trees along the former Brooklawn Golf Course section of Ley Creek, now the home of Feldmeier Equipment, Inc. The Town's DeWitt Advisory Conservation Commission (DACC) and Tree Committees both support the Ley Creek Watershed Project; if you would like to become involved with these groups, please contact our Planning and Zoning Dept., (315) 446-3910, ext. 3. Or go to: [https://www.townofdewitt.com/departments/planning\\_\\_\\_zoning/index.php](https://www.townofdewitt.com/departments/planning___zoning/index.php).

**Edward M. Michalenko, Ph.D., Town Supervisor**  
President, Onondaga Environmental Institute

## \*FUN FACT...

Did you know your community's watershed connects to the ocean? When people talk about the "continental divide," that references whether water eventually flows into either the Atlantic or Pacific Ocean. So, depending on where you live in the country, water from your neighborhood or local town creek ends up in either the Atlantic or Pacific Ocean!



*OEI work crew with healthy White Sucker, 2021*