



# 2017 Annual Report

*A brief summary of some of the many projects and programs undertaken by your local Conservation District in 2017*

*The District's mission is to protect and improve the lakes, rivers, streams, soils and other natural resources of Warren County through locally-led conservation projects and programs.*

## **Hazard Mitigation**

...is defined as "to make less severe" and to make communities less susceptible to losses from natural disasters. An important point to understand is the process is intended to **lessen damages**, not totally eliminate them. Repetitive flooding of municipal roads at the same location is an example of what can be addressed as HM primarily deals with ongoing issues. While a hurricane is not likely to impact our area in a given year, the resultant flooding and other damage from a hurricane is considered recovery and will fall in other mitigation strategies and is generally dealt with at the time of impact.



Why is it important to understand and consider HM? It is essentially a lesson in economics. For every \$1 spent on mitigation, it is estimated that \$4 is saved following an event. This can be a significant cost savings, as local, state and federal budgets are stretched thin. Bringing concepts of HM on infrastructure and planning projects will add an initial cost, but will reduce future issues and repair costs. Grant funding may be available to communities that can document the repair costs of reoccurring infrastructure losses. With these grant programs, proposing a reasonable and achievable solution while showing the commitment of up to 25% local match is key.

Homeowners may also take simple proactive efforts in and around their home. While we are not sitting on the San Andreas fault, there are more earthquakes in our region than realized. One simple method to reduce a home impact is to strap a hot water tank to a wall to prevent it from tipping over. If a tank tips, it can cause a catastrophic event due to internal pressures. This fix is neither expensive nor difficult to do. Many of our municipalities have either hardcopy brochures or webpage information with additional tips and ideas.

Understanding HM is important to reduce future costs and personal heartache. Most people and communities conduct various types of mitigation without realizing it. What do you personally do and what does your community do in an effort to safeguard your family, home and property? As you continue through this newsletter, you will see multiple projects that deal with conservation and hazard mitigation at the same time including stormwater and stream crossing improvements. Stormwater projects address water quality and can assist to mitigate flooding. Stream crossing improvements address aquatic organism passage and reduces the potential of the road damage and flooding due to culvert blockages from debris. The Warren County Hazard Mitigation Plan was formally adopted by the Federal government and New York State in 2017 and all of the municipalities have projects and goals listed for the next five years.

## Agricultural Environmental Management

During an **AEM** meeting at a Thurman farm, a section of barnyard was flooded by stormwater runoff from the County road and its ditch, which eventually flowed to a wetland. To remediate the issue, the District developed an elevation survey and designed a new berm and elevations for a vegetated swale, to convey runoff from flooding the barnyard and impacting the wetland.

In partnership with the Warren Co. DPW, a 400' vegetated swale was constructed and a 100' section of berm was built to keep the stormwater in the swale. The two collapsed drainage culverts were replaced with rock protection at the outlets. All disturbed areas were hydroseeded and compost filter log check dams were temporarily installed to reduce stormwater velocity and increase infiltration. The project has held up to some very large intense summer storms and the Warren Co. DPW and the farm owners are very happy with the success of the project.



## Stormwater

### Projects & Programs

**Warrensburg:** The District teamed up with the Highway Department to install four drywells, catch basins and stormwater chambers to reduce and treat stormwater runoff in the town. Drywells capture sediment and infiltrate runoff. Drywells overflow into stormwater chambers, which also provide additional storage.

**Glens Falls:** We are assisting the City of Glens Falls with a NYSDEC stormwater grant. This year we installed the first of six projects that included a drywell and catch basin to reduce and treat stormwater runoff in the **Halfway Brook Watershed**.

**Bolton:** The Up Yonda Farm project consisted of 2,000 sq. ft. of porous pavers at the south end of the parking lot to treat stormwater runoff before it enters into a tributary. Perforated tile line was placed under the pavers, to convey stormwater to a rain garden with 264 native plants allowing for infiltration and nutrient uptake. The partnerships that contributed to the success of the project included Warren County DPW, Warren County CCE Master Gardeners, Up Yonda staff, the Lake George Land Conservancy and the Adirondack Park Invasive Plant Program.



## Stormwater Projects and Programs Continued...

### Adirondack Beach

The final **bioretention structure** was installed at the town beach in Adirondack adjacent to Church Street. This structure included a stone trench for sediment capture which overflows to a garden bed for infiltration and treatment. The overflow structure diverts water to the North, further reducing the impact of stormwater entering the lake. Funding from the NYS Dept. of State and the support of the Town of Horicon, volunteers from the East Shore Schroon Lake Association and the Chester-town Highway Department made this project possible.



### Highland Project

The District and the Lake George Association teamed up to assist with the protection of **stormwater structures** on Horicon Ave in Bolton. In past years, the District and County DPW installed several stormwater improvement structures on Horicon Ave. After a significant storm events, the structures were being filled by sediment coming from Highland Drive. With funding from the LGA, design and oversight from the District and construction by the County DPW, the Highland Drive project was put into action. The project included changing the paved swale to discharge runoff six foot off the edge of the road into a new vegetative swale. The stormwater would then flow to a drywell with a rock protected outlet before returning to the base of the road and the county stormwater system. This project should reduce the volume of sediment and stormwater going to the original county system and ultimately impacting Lake George.



Pre construction



Post construction

### Woodchuck Hill

Together with the Queensbury Highway Department, the District installed a **200' vegetated swale** over bedrock and soils, with high groundwater to reduce stormwater runoff and steep slope erosion to a tributary of Lake George. The swale was constructed with 900 linear feet of compost filter logs, which are 8" diameter filter socks filled with a specific soil mix and inoculated with a conservation seed mix. The vegetated swale flows into 65' of rocklined ditch and 40' of a shallow grassed bioretention area. This project reduces roadside erosion and pollutants from directly flowing into a tributary of Lake George.



Grassed Compost Filter Logs

## ***Habitat Improvement Project: Lake Champlain Basin Program***

Three Lake Champlain-Lake George watershed tributaries have been selected for habitat improvements for this project: **English Brook** in the Town of Lake George, **West Brook** in the Village of Lake George and **Halfway Brook** and its tributaries in the Town of Queensbury. To date, numerous brush bundles have been placed into a previously remediated section of English Brook and the sand impacted sections of Halfway Brook to enhance fish and invertebrate habitat. Also completed was the construction of a floodplain bench in West Brook. The Village DPW provided personnel, equipment and materials; the Town of Lake George Highway Department also assisted with materials and equipment to help complete this project, as seen in the photos on the right. All the materials used in construction of the floodplain bench were native watershed stone donated by the municipalities. Tree root wads were used to repair undermined banks along this section of West Brook. In Queensbury, site visits to develop stormwater runoff controls and affect shoreline bank repairs along a Halfway Brook tributary pond were completed, with additional project designs being developed for 2018. Further planned bank plantings at all three sites will occur during the spring of 2018. The District would like to thank the Town and Village of Lake George and the Queensbury DPW's for their unending support in all of our region's conservation efforts.



***Pre-construction on the West Brook***



***West Brook with floodplain bench***

## ***The Small Lake and Pond Assessment Program***

The District started the Small Lake and Pond Assessment Program in an effort to **assist municipalities and private landowners** with determining the basic conditions found within their smaller waterbodies. With an organizational support grant from the Lake Champlain Basin Program, the District purchased the necessary testing equipment to make a primary evaluation for a lake or pond's general physical condition. This program tests for water temperatures, dissolved oxygen levels, conductivity and or salinity levels.

A horizontal sampler permits us take discrete water samples from any depth; and the Secchi disc is used to determine water clarity and the availability of sunlight to reach the lakes bottom. With this information the depth of the pond's littoral zone can be estimated; this is the area of a pond that will support aquatic plants. These evaluations will aid in the determination of a waterbodies capacity for holding desirable fish species, define the pond's aquatic plant communities, help identify invasive species and the possible effects of both non-point source and road runoff pollutants. To date seven waterbodies have been assessed within the Warren County's two major watersheds.



## Stream and Infrastructure Improvement

An undersized culvert in the Town of Chester was designated to be replaced with a new properly sized and better aligned structure. The culvert is located on an unnamed tributary to Bird Pond under **Wood Wells Road** off of Igerna Road. The original structure, an undersized round culvert was an impediment to both flow and aquatic wildlife passage. The new structure will improve aquatic organism access to the tributary's headwaters by being properly embedded in the channel and with an improved alignment. The replacement eliminates a flow constriction which reduces upstream and downstream bank impacts and allows for free migration of all aquatic species.



A poorly embedded and degraded structure on a **Hague Brook tributary** was designated by the Warren County DPW to be refitted with a new culvert. The culvert on the New Hague Road was an impediment to both seasonal high flows and aquatic wildlife passage. Poor placement caused a sizable drop at the culvert outlet preventing the upstream movement of brook trout and other species. The new structure has been placed to improve access to the tributary's headwaters. The remaining funds from this grant will be utilized to assist replacing three other crossings in the Bolton, Chester and Queensbury.



Pre construction



Post construction

## ...Worth A 1,000 Words



Bob Bombard—NYSDEA Division V Merit Award winner



2017 MS4 Stream Cleanup Team!



Emergency Stream Intervention training



Ivy Island Stabilization—Luzerne

## Erosion and Sediment Control Program

The new Finn T75 hydroseeder (**blender in a tank**) enables the District to stabilize bare soil at municipal construction sites and ditching projects. By combining mulch (wood fiber), zero phosphorus fertilizer and a conservation seed mix, and then spraying it on the exposed soil surfaces, soil erosion is reduced or eliminated upon seed germination. This is the most cost effective erosion control method to prevent the migration of sediment that would otherwise runoff to our lakes, rivers and streams. Stabilization at the source is a much better option than sediment control.



In 2017 the District closed out a NYSDEC grant and seamlessly transitioned into a second grant for erosion and sediment control projects. Fifty seven projects were completed covering 16.75 acres of disturbed soil in the county.

## Community Outreach

The District provides numerous educational outreach programs. There is the annual County **Envirothon** for high school students, The Farm Talk Seminars for small farms and enthusiasts, Environmental Field Days with Cornell Cooperative Extension for elementary students and our 4 hour Erosion and Sediment Control Classes for professionals. The Annual Tree and Shrub Sale and our Spring and Fall Fish Sale, our cornerstone programs continue with consistent support.

The 2017 **Tree & Shrub Program** specimens have been used to assist with wind breaks, visual barriers, attracting wildlife, controlling insects or simply to add color to the backyard.

The 2017 **Spring & Fall Fish Sale** offered Rainbow Trout, Largemouth Bass and fathead minnows, and in fall we include Brook trout! Over two dozen pond owners took advantage of this program.

Both program forms can be found on our website [warrenswcd.org](http://warrenswcd.org).

**The 2017 Farm Talks** was held four times with **106 attendees**. Topics included soil blocks and soil health, vegetable production in Northern NY and pest management, agroforestry and shiitake mushrooms, and building a small farm and marketing. Over the five years of The Farm Talks, we have held 11 events and 22 presentations that included presenters from eight different agencies, seven farm owners, two landowners and one college.



2017 Champs—North Warren Team #1



## Community Conservation Program

The District initiated the Community Conservation Program to encourage start up **local conservation projects** throughout the County. Seven projects were funded including a pollinator garden, aquaponics system, the purchase of tools for trail maintenance, native plants specimens to replace invasive species, compost bins and rain barrels. Partners in these projects included; SUNY Adirondack, Warrensburg Elementary School, Cornell Cooperative Extension and the Warrensburg High School.

One specific conservation project was the **pollinator and vegetable garden** at the WAIT House in Glens Falls. This project provides a hands on

educational component for the youth living at the house. In addition to the garden, a compost barrel was installed to recycle food scraps and provide nutrient rich compost to the garden each year, and to complete the full conservation circle, a rain barrel was installed to water the garden and reduce stormwater runoff to the City's stormwater system. We would like to thank the Cornell Cooperative Extension Master Gardens for providing an educational program on caring for the garden, producing healthy compost and using the rain barrel to properly water.



## Conservationist of the Year

In 2017, the District recognized **Jason Monroe**, as Conservationist of the Year, for the successful partnership and resource protection projects between the District and the Highway Department.

Even before becoming Highway Superintendent, Jason has been assisting the District with projects and has asked for assistance and recommendations relating to permits, design and construction ideas. As the Highway Superintendent, Jason has contacted our office numerous times for assistance with stormwater, erosion and Hazard Mitigation issues. Jason understands the importance of local lakes, streams and other resources and works with the District for protection of these critical features. Jason's leadership and support of resource protection programs has been absolutely essential for the long-term protection and improvement of the Town and County's natural resources.



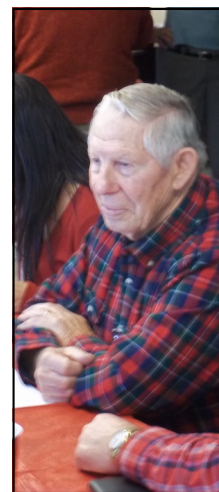
*Jason Monroe (L) and  
Ron Montesi, SWCD Co-chair (R)*

## In Memory

In January we lost a valued member of our board and a good friend, **Charlie Maine**. Charlie had volunteered his time with the District since 1986 as a member of the board that supported District staff when USDA NRCS pulled back from Warren County in the mid 1990's, enabling the District to focus on local conservation and resource priorities.

Through the board of directors meetings, budget meetings, personnel meetings, project tours, conferences, and other District events, Charlie has volunteered thousands of hours of his time to ensure that the District was performing at its best. Can one assign a value based on the hours? It's possible, but the benefits from that time to the District are incalculable.

We thank Charlie and his family for the years of support.



## Notes...

- **Upper Hudson River:** The District is part of the Upper Hudson Watershed Coalition and our section of the watershed plan is building all of the GIS maps for the report. Upon finalization of this report, the Upper Hudson will have a formal plan identifying the resource concerns in the overlooked watershed which consists of three million acres in seven counties.
- **Champlain:** The District is a member of the Champlain Watershed Improvement Coalition of New York and has been active in projects and programs in this watershed. The District has assisted with the development of a watershed stormwater plan and will begin applying for funding to address the many resource concerns!
- Check the website for the **2017 Friends Lake Watershed Assessment** that was developed by the District in partnership with the Town of Chester and the Friends Lake Property Owner's Association.
- The District assisted, partnered, and helped the communities while working with **over 60 partners** to deliver local, regional and state projects and programs.
- Please **contact our office** with any natural resource questions you may have or check out our website for our watershed/stormwater reports and assessments.



## *Did you know...*

- The Warren County Soil SWCD was created by the Warren County Board of Supervisors in 1956 under NYS Soil and Water District Law. The District is a ***Non Regulatory*** county-based organization overseen by a seven member Board of Directors for local priorities.
- The District's 2017 operating expenses were **\$495,373**. Our 2017 funding allocation from Warren County was **\$324,657**, 0.23% of the 2017 county budget. The remainder of our income comes from competitive grants, municipal contracts and reimbursement from New York State.
- The District has received or partnered on seventy five **grants in the past fifteen years, totaling over \$5.4 million dollars** for conservation projects in the county.

### **2018 SWCD Board of Directors**

Frank Thomas - Chairman  
Ron Montesi - Vice Chairman  
Mark Brown                      Tim Costello  
Craig Leggett                  George Ryan  
Tim Thomas

### **District Staff**

Jim Lieberum, District Manager  
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