



2013 Annual Report

A brief summary of some of the many projects and programs undertaken by your local Conservation District in 2013.

Each newsletter presents a challenge for deciding what projects and programs to include. We were again very busy this past year, and a big congratulations goes to the staff and the Board members for their extensive efforts to make our success possible. I think that we accomplish quite a bit for a five person office.

I would like to also acknowledge our three interns and their contributions from this summer. Allie Smith, our Conservation Intern, did a significant amount of GPS mapping and organization of projects. This allowed staff to utilize their time on construction projects. Jay Cavanagh interned from RPI/Darrin Freshwater Institute in Bolton Landing, worked on stream crossing evaluations, stormwater projects and provided muscle power as needed. Lastly Alexis Stein, a student from Lake George, spent the fall and early winter learning about what we do and what conservation can be about. Alexis also assisted with invasive species management, stream evaluations, worked on GIS and anything else that we felt would help her in the future. I feel it is our responsibility to assist others, especially those who will be starting their careers soon. In Allie's case, she is out of college and has secured a position as an environmental educator. Jay is in his last year with RPI as a Civil Engineering student and Alexis will be off in the fall to Paul Smith's for natural resource conservation. I hope that we were a positive influence on them and were able to provide the guidance and support that they needed, as they will be the ones making decisions in the near future.

Jim Lieberum, CPESC, District Manager

Glen Lake Watershed Projects— “Going Green”

This project is a partnership between the Warren County SWCD and the Town of Queensbury Highway Department, for the purpose of constructing and installing stormwater retrofit improvements identified within the Glen Lake Watershed. These systems are designed to capture and treat or physically remove stormwater runoff from directly reaching the lake or its tributaries, thereby eliminating sediment, pathogens, phosphorus, and floatables.

In 2013, work at the Gurney Lane Recreation Area included the installation of four drywells and a 630 sq. foot rain garden to remove runoff from the expansive blacktop parking areas. Prior to their installation, the stormwater from the parking lots flowed to a small trout stream that feeds the areas fishing pond which eventually flows to Rush Pond and Glen Lake. The Gurney Lane roadside extended flow path design receives sheet flow and paved gutter stormwater runoff from the Gurney Lane Road and drains to the same unnamed stream. By extending the flow distance into a well vegetated area using coir logs, we directed the runoff from the stream. The stormwater runoff now has the opportunity to reduce velocity, drop sediment and infiltrate into the ground.

Concerns about stormwater runoff from the parking area at the Queensbury boat launch at Glen Lake were addressed with the installation of 600 sq. feet of permeable pavers at the head of the ramp. Prior to the porous paver installation, runoff pooled in front of the boat ramp and overflowed to the lake. The first flush of stormwater runoff can now infiltrate into the ground.

At St. Mary's Bay the flow path has a similar design to the Gurney Lane coir log project. A line of coir logs were installed to redirect runoff from Glen Lake Road to a town owned parcel. The runoff will now infiltrate in the woods with the vegetation capturing sediment and taking up nutrients. Prior to this project, untreated stormwater flowed directly into the St. Mary's Bay.



The new Gurney Lane Park rain garden



Porous pavers at the Glen Lake boat launch

Fish and Wildlife Passage Program

The goals of this initiative are to improve spawning fish migration, reduce long-term culvert scouring, improve existing municipal infrastructure and educate local highway departments on the sizing and installation of fish passable culverts. The Lake George/Hudson River Basin Fish Passage Culvert Improvement Project is in part funded by the NYS Department of Environmental Conservation's Water Quality Improvement Program Round 10 grants. To date, this project has included the design and installation of nine new stream culverts and one bottomless arch bridge in eight towns. They were replacements for culverts in disrepair that occluded fish passage and migration in NYSDEC designated trout streams.

The Warren County Soil and Water Conservation District worked with 7 town highway departments and the Warren County Department of Public Works to provide local on-the-ground training on these new required culvert installation techniques. Three of the culverts were replaced in 2013.

- **River Road Johnsbury, NY:** The old culvert was on a tributary of the Hudson River and was undersized, heavily corroded and had an outfall that dropped over 1 foot. The replacement culvert was sized and installed according to the NYSDEC's requirements. Two 25' sections of 4' arched pipe were installed allowing for greater stream flow and access upstream for trout reproduction.
- **Silver Bay Road Hague, NY:** The Silver Bay Road site was made up of a round corrugated metal culvert with a 15' channelized section upstream; there was a 1' drop at the outfall of the culvert. The replacement culvert was a 40' long, 6.5' aluminized squashed culvert. The final slope of pipe was <2% and native stone was utilized for inlet and outlet vertical headwalls. During the de-watered phase of the project approximately 15 trout fingerlings and 4 adults were removed from the de-watered stream section.
- **Battle Hill Road Hague, NY:** The Battle Hill Road site had a poorly embedded, narrow and undersized round corrugated metal culvert and an overflow culvert due to heavy beaver activity along the stream. The replacement pipe was a two piece 30'x 6.5' arched culvert. Placed stone vertical headwalls with a filter fabric backing were built at both ends of the culvert to the shoulders of the road.

This highly successful program provides assistance and materials for the municipalities. We hope to keep this program continuing at its current level with another round of funding as there is an increased need for improving our communities stream crossings.



Battle Hill Road crossing during construction



The new Battle Hill Road crossing

Watershed and Stormwater Assessments- find them at the SWCD Website

The Warren County SWCD has been very active in watershed and stormwater assessments this past year. The stormwater retrofit improvements and best management practices outlined in these reports lead to multiple infiltration and green infrastructure projects. Stormwater runoff is considered to be the largest water quality impact in most developed watersheds. This being said, a large portion of our assessments involved the mapping of stormwater conveyance structures, flow patterns and outfalls. The data is first mapped in the field with a GPS, is then transferred to a GIS map where it can be analyzed as a whole.

The reports the District produced in 2013 include *The Town of Warrensburg Stormwater Mapping Report*, *Town of Bolton Stormwater Retrofit Opportunities*, *Town of Queensbury Stormwater Identification Project* and *Crystal Lake Watershed Stormwater Assessment*. Along with the reports listed, all of the District's assessments and studies can be found on our website at www.warrenswcd.org. The entire website has been updated along with a newly developed AEM Program page. Throughout the year our website home page is a continual stream of educational opportunities including trainings, presentations, forums, conferences and up coming programs. Also don't forget to check us and our projects out on Facebook at Warren County Soil and Water Conservation District. Please feel free to contact us with any questions or suggestions you may have.

The 2013 Warren County Envirothon

The Warren County Envirothon hit a milestone in 2013, it was the 20th Anniversary of the program! Over 100 students had competed in the event. The winning team was from Warrensburg Central School and went on to compete at the State Envirothon at SUNY Morrisville in Morrisville, NY. The Envirothon tests the student's knowledge in the areas of Soils, Forestry, Aquatics, Wildlife and a Current Issue. This year's current issue is "Sustainable local agriculture/locally grown". In recent years a strong movement has emerged to redefine agriculture from the perspective of its sustainability and its interconnection with its immediate environment. The movement has brought focus not only to these connections but to the profitability of small farms, the practicality of individuals growing their own food, and the environmental and economic benefits of locally produced foods.



**2013 Warrensburg Team # 2
poses on an RC&D portable
skidder bridge**

New- "The Farm Talks"

The Warren County SWCD is pleased to announce that the District is beginning a series of informational agricultural and self sufficiency talks. With the ever increasing interest on locally produced foods and home-steading, we decided to start this series, inviting two presenters at a time to discuss their topic of interest.

The first session will present on beekeeping and maple sugaring for homeowners. Future topics may include: soil nutrition and health, cultivating hops, farm planning, log milling, blacksmithing and other ideas.

Please feel free to provide suggestions, as this will be driven by community interest. There will be a current "The Farm Talks" flyer posted at our website. Please call or email Nick Rowell to reserve your spot, as seating may be limited. For more information on our Agricultural Environmental Management Program (AEM) please refer to our website <http://warrenswcd.org/aem.html>. AEM is available to provide agricultural land-owners and producers technical assistance at no cost.



Bolton Stormwater Improvement Projects

In the Town of Bolton, during rainfall and snowmelt events, untreated stormwater runoff flows from road networks discharging directly to Lake George or its tributaries. There have been significant water quality declines noted in Finkle Brook by the Darrin Freshwater Institute and linked to road runoff. This project begins an effort in the Town of Bolton that has seen great success in the Village of Lake George for addressing stormwater treatment. The goal is to divide the impervious watershed areas for treatment, rather than a single end of pipe solution.

The Warren County SWCD, Warren County DPW, The Lake George Association, the Town of Bolton and the Lake Champlain Basin Program worked cooperatively to develop a plan that meets the stated goals of the project. In early October of 2013, the project was completed and was successful in installing seven infiltration systems and rehabilitated an existing stormwater infiltration trench. These systems were located on Mohican Road, Horicon Avenue and Edgecomb Pond Road. The outcomes for this project include a significant reduction of untreated stormwater reaching Lake George, as this water will be captured and infiltrated in roadside stormwater infiltration systems.

These types of project should be part of the solution as we move forward with protecting water quality. Green infrastructure projects should be considered where feasible and a change in road management practices may be necessary as well. Also keep in mind that a successful stormwater remediation program requires landowner participation—find out what you as a landowner can do about stormwater at our website!



Project during construction



Completed system

Municipal Separate Storm Sewer System Programs (MS4)

The Warren County SWCD is the Stormwater Management Officer for Warren County and the Town of Queensbury. This past year has been very busy completing the required tasks for the Programs. The outfall and stormwater conveyance mapping has been completed showing road runoff and direction of stormwater flow through pipes to each drop inlet, ditch and outfall. The outfall reconnaissance inventory and Illicit Discharge Detection and Elimination (IDDE) are well underway. The District and volunteers are collecting outfall data and water samples that are tested for signs of illicit discharge. The District has also taught multiple MS4 educational trainings for town meetings, highway departments and local organizations. Volunteers assisted in placing storm drain markers to educate the public on stormwater drop inlets that outfall to waterbodies. The MS4 Program also tasks the District with construction inspections on certain municipal projects in the MS4 boundaries.

For detailed information on the Municipal Separate Storm Sewer System (MS4) Program, please refer to our website <http://warrenswcd.org/ms4.html>.



Halfway Brook stream cleanup

Hazard Mitigation Program

This past year *most* of our communities have been fortunate and spared from severe impacts from the many natural and manmade disasters that we have seen in the recent past. We did experience road washouts, icing events and wind storms, but things could have been much worse. The goal of mitigation is to reduce potential impacts from a multitude of hazards before they occur. In some cases it may eliminate a particular hazard or reduce its impacts.

Many highway departments have been working towards improving infrastructure. Through the use of new products, designs or materials. Examples of mitigation are the road crossing structures that have been replaced with newer structures to accommodate higher volumes of water and debris. If a crossing structure is appropriately selected and installed, the potential impacts from a 100 year storm event are significantly lessened. Remember, not just water needs to pass through these structures; the streams bedload material, pieces of beaver dams and other woody debris commonly cause problems. We focus on stream crossing quite a bit since we work with the municipalities on these issues. However there are many other types of remedial activities: road improvements to reduce standing water (and icing in winter), proper fuel storage and protection, electrical backup for critical structures (i.e. water, wastewater plants). We have assisted the local communities through various grants received and through FEMA's programs. This past year we applied for funding for a new All Hazards Mitigation Planning grant for the county and will hopefully hear back in several months. This is a lengthy process that requires the input from all of the communities and is an active document that can be used as a "cook book" for prioritizing existing projects and for future planning.

Will there ever be a "silver bullet" to address all of the hazards out there? Absolutely not. However with an understanding of the goals of hazard mitigation, communities can develop plans that identify and correct existing concerns and implement changes to our management strategies. Nature will still surprise us, but planning ahead for events will hopefully reduce their impacts.



Town of Johnsburg, June 2013



"Houston, we have a problem..."

2013 Conservationist of the Year

The District would like to announce that Ed Pennock, Town of Warrensburg Highway Superintendent is our 2013 Conservationist of the Year. The District has worked with Ed and his crew on numerous projects, including the replacement of a large culvert to improve fish passage and 4 stream crossings that had been damaged during storm events. Ed is proactive in requesting District assistance with evaluating natural resource issues, erosion and sediment control, stormwater recommendations and permit assistance for projects. Ed is active in the Town Highway Superintendents Association of Warren County and is always willing to lend a helping hand to the District when needed. His interest and dedication to conservation is more than evident, and we were honored to recognize Ed as our 2013 Conservationist of the Year!

The Conservationist of the Year Award has evolved over the years. The District attempts to recognize an individual, group or municipality that assists with implementing the goals of the District and who is willing to go beyond what may be considered the normal work routine. Here are a list of the recent Conservationists of the Year:

- 2002: Tim Coon, Bolton Highway Department
- 2003: Dave Decker, Lake George Watershed Coalition
- 2004: Dan Hajek, Village of LG Department of Public Works
- 2005: Doug Paton, Brant Lake Association
- 2006: George Hilton, Town of Queensbury Planning
- 2007: Gary Clark, Chester Highway Department
- 2008: Walt Lender, Lake George Association
- 2009: Marc Migliore, NYSDEC
- 2010: East Shore Schroon Lake Association
- 2011: Mike Travis, Queensbury Highway Department
- 2012: Two recipients were recognized:
(1) Bill Lupo, NYSDEC and (2) Warren County



Ed Pennock (left) and SWCD Chairman Frank Thomas (right)

District Fish and Tree Programs

The District's *Annual Tree and Shrub Program* grew by leaps and bounds with the addition of berries and fruit trees in the last two years. We started with blueberry bushes in 2012 and then added apple trees in 2013. The District conservatively started with 20 pairs of apple trees (McIntosh and Cortland's) on a pre-order list not knowing if there would be an interest in them. When all was said and done 80 pairs were sold by the day of the event. In all, over 4400 specimens of tree and shrub seedlings and transplants were sold, 43 wildlife houses, 50 tree mats and shelters, 35lbs of wild game seed and 10 packages of wildflower seeds. For 2014 we replaced the Cortland apple trees with Golden Delicious and added Bartlett Pears to the specimens that can be ordered.

The District will be continuing the biannual sale of fish for pond owners as its popularity grows. The District sells trout, bass and minnows in both the spring and the fall of the year. Local pond owners need only to bring a container to transport the pre-bagged fish to keep it in an upright position to transport them to their pond. Fish usually come in the 6"-10" range. Our fall program sold 300 trout, 50 bass and 3 minnow brooder kits.



2013 Grant Funding Applications

This past year the District developed 10 funding applications from several sources: NYSDEC (5), Lake Champlain Basin Program (3), Hudson River Improvement Fund (1) and FEMA (1). The total project costs for these applications was just over \$1.0 million dollars. The projects varied from stormwater improvements to erosion and sediment control practices, invasive species management, hazard mitigation, urban forestry and education. The District develops applications in house and has a strong history of success in receiving and implementing projects. It will be a while before we find out how successful we were, but we are confident that the proposals submitted were strong and provided multiple benefits to our communities.

Agricultural Environmental Management

The Agricultural Environmental Management (AEM) Program in Warren County focused more on niche farming and homesteading this year to appeal to a larger farming community. The majority of our county is forested and mountainous creating specialized farms on a smaller scale when compared to the rest of New York State. We have also noticed through site visits, trainings and public involvement that homesteading has become very popular in our county.

A newly created outreach and educational series in our AEM Program is "The Farm Talks". This series will expand our AEM Program by bringing in new farms of all sizes and informing landowners of the AEM benefits offered through our office.

In 2013 our AEM Program assisted farmers with GIS maps of contours, soils, acreage, hydrology and aerial photos. We GPS mapped farm properties for the development of unpaved farm roads with recommended Best Management Practices for erosion and sediment control. The maps were also used for cost estimations and construction planning. Environmentally sensitive areas (wetlands and streams) were highlighted on the maps for future planning and projects. In addition, a more unique project we assisted a farm with this year was tree identification for mushroom farming.

Through our AEM Program we offer free technical assistance to farmers and producers with the goal of promoting conservation for the land as well as improving production. Being part of the program offers a wide range of resources and onsite farm planning assistance and recommendations.

For more information about our Agricultural Environmental Management (AEM) Program, please refer to our website <http://warrenswcd.org/aem.html>.



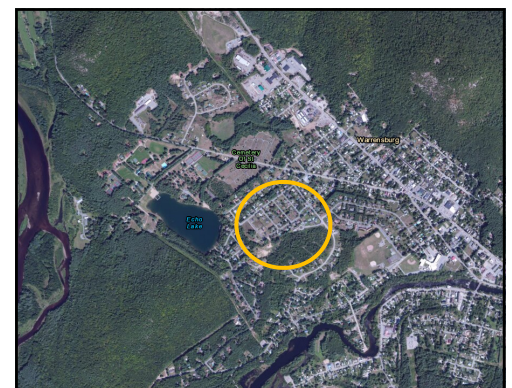
Municipal and Landowner Assistance

The District assists landowners, municipalities, public and private organizations with numerous requests for assistance through the year. Many issues are similar: erosion, seeding recommendations, stormwater issues and education. There are some that don't overlap such as pondsite investigations for landowners or Hazard Mitigation assistance for municipalities. However we take great pride in the fact that we can usually provide assistance through our office to resolve a particular issue and if we cannot, we can advise the individual or municipality where to turn to.

We are happy to announce the development of an interactive on-line portal for the public to be able to access the county's historic aerial imagery from their home or business. Several years ago we began scanning in our imagery (1948, 1966, 1982 and 1990) to have them on our computers. However with the change in technology we felt that there was an opportunity to have this information active for the public on the web. The Town of Queensbury and the Warren County GIS Departments have been exceptionally helpful as partners in order to succeed. In essence, you will be able to access the website and view a current image such as a Google Map and compare it with any of the historic images. It will not overlay on top of the new image, but you will be able to toggle between the images to compare them. You will not need any special software, just click on: [Warren County Historic Aerial Imagery Project](http://www.arcgis.com/apps/OnePane/basicviewer/index.html?appid=cbe2bd366f8d4b6eaa68913f184fad75) or type in <http://www.arcgis.com/apps/OnePane/basicviewer/index.html?appid=cbe2bd366f8d4b6eaa68913f184fad75>. With the 1948 and 2014 on-line image, how many of you remembered or knew of the race track in Warrensburg?



1948 image



2014 image

A Few Other Conservation Efforts.....

Erosion and Sediment Control Program: Utilizing our hydroseeder and bale chopper, the District assisted ten municipalities with reducing erosion and sediment through this highly successful program. Twenty eight projects were completed and more than eleven and a half acres of disturbed land or 506,000 square feet of surface area was re-vegetated.

The target of this program is the application of a mixture of grass seed, fertilizer and mulch to bare or under vegetated roadside ditches and other disturbed soil areas where water quality may be of concern. The goal of this program is to establish fast growing native vegetation to prevent erosion. It is generally recognized that with proper vegetation establishment, there is up to a 90% reduction in soil loss.

Erosion control is an effective management tool to reduce sedimentation and through varying funding sources, this program is generally offered at no cost to our municipalities. We contact our municipalities in the early spring for participation and to review the program. If you feel that your municipality can benefit, we encourage you to contact us.

Champlain Watershed Coalition of New York: This past year CWICNY said goodbye to its coordinator, Andrew Snell. Drew had been with CWICNY as a board member or as the coordinator for 10 years and had been around for some very successful projects and programs. We wish you the best of luck Drew. As it currently stands, CWICNY is moving forward and continues to be a strong presence for projects that benefit the communities and resources on the NY side of the Lake Champlain Basin. The website is being updated, so please visit it for more information to see if CWICNY may be of service to you.

Upper Hudson River Watershed Coalition: In addition to CWICNY, we are part of an effort for the formation of a working group of seven SWCD's, the Lake Champlain-Lake George Regional Planning Board, the Greater Adirondack Resource Conservation and Development Council and the NYS Soil and Water Conservation Committee. Nearly 75% of Warren County is in the Hudson River Watershed and it is time that the watershed communities have identified resource needs. The group developed two funding applications for consideration and submitted them to the NYSDEC, one of which is water quality improvements and the other mainly deals with improving stream crossings for increased volumes and for fish and wildlife movement.

Schroon Lake Milfoil Management Program

The Towns of Chester, Horicon and Schroon continue to work together with the Warren County Soil and Water Conservation District to help fight the spread of Eurasian Watermilfoil (EWM) in Schroon Lake. In 2013 the Conservation District contracted Aquatic Invasive Management, LLC (AIM) to hand harvest EWM from Schroon Lake. Funding for this program is provided by the three partnering municipalities and the program is managed by the Warren County SWCD.

AIM picked 87+ bags of milfoil weighing 2,178 pounds from Schroon Lake in their five weeks of harvesting. There were 11 locations in the north half of Schroon Lake (Essex County) and one area in the south end of Schroon Lake (Warren County). Three of the sites this year accounted for 80% of the EWM removed from Schroon Lake and in fact, 44% of the EWM was removed from within 1,000 ft. of the Horseshoe Pond Brook tributary! Two+ bags of Curley Leaf Pondweed, another aquatic invasive, were also removed during the harvest period.

We are in the second year of a three year contract with AIM for milfoil control and for this year the number of hours for harvesting has been reduced as planned. EWM will always be present in Schroon Lake, however with the current management strategy for harvesting and the volunteers who seek out and report milfoil locations, it appears that the EWM population will be significantly reduced in the near future.

The District would like to acknowledge the tireless efforts of the Schroon Lake Scout Program, East Shore Schroon Lake Association, Schroon Lake Association, and Adirondack Ecologist, LLC for their assistance in this successful program.



Milfoil Man fighting.....



394 Schroon River Road
Warrensburg, NY 12885

Did you know...

- The Warren County Soil and Water Conservation District has been in existence for 58 years, and was created by the Warren County Board of Supervisors in 1956 under NYS Soil and Water District Law.
- The District is a county-based organization overseen by a seven member board of Directors for local priorities.
- The District's total 2013 operating expenses were \$446,362.
- Our 2013 funding allocation from Warren County was \$268,000. The remainder of the District budget comes from competitive grants and some reimbursement from NYS.
- The District has received over 63 grants in the past eleven years, totaling over \$4.3 million dollars. These dollars go directly to conservation projects and programs for Warren County.

2014 SWCD Board of Directors

Frank Thomas - Chairman
Ron Montesi - Vice Chairman
Mark Brown Tim Costello
Charlie Maine George Ryan
Evelyn Wood

District Staff

Jim Lieberum, District Manager
Rhonda Jarvis, Office Manager
Dean Moore, Sr. District Technician
Bob Bombard, Water Resource Spec.
Nick Rowell, Nat. Resource Spec.

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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.

Visit us online at our website: www.warrenswcd.org or "Like Us" on Facebook at [Warren County Soil and Water Conservation District](http://www.warrenswcd.org)