Summer 2017

CONSERVATION QUARTERLY

Onondaga County Soil & Water Conservation District

USING FORESTRY TO ENHANCE HABITAT, PROTECT WATER RESOURCES, AND DIVERSIFY YIELD

By Paul Harris, Atlantic States Legal Foundation
Guest author

Planting trees and shrubs is a great way to mitigate environmental damage and incorporate protective measures into an agricultural operation. A restoration buffer can reduce flood impacts and erosion, provide crucial wildlife and pollinator habitat, and uptake nutrient-laden runoff from fields before it reaches a stream or river. The benefits don't stop there however. Depending on the species used, these plantings can also provide a source of income. Fruit and nut-bearing trees and shrubs can be successfully included in an agricultural buffer, and planted so they are easily harvestable. Depending on site design and business objectives, there could also be an opportunity for agritourism. There are plenty of native species available for this purpose, if the situation calls for it. These include: blueberries, paw-paws, American persimmon, American hazelnut, black chokeberry, and black walnut (just to name a few). Continuing work on restoring the American chestnut could make this magnificent tree available for cultivation in the near future.

Even if harvestable plants aren't used, there are still benefits to incorporating ecological buffer zones into a landscape or property plan. Native trees and shrubs provide habitat for wildlife (including game animals), as well as hundreds of species of bees and other pollinators. Buffer plantings reduce nutrient runoff, which in turn prevent algal blooms downstream that can cause fish kills and water quality issues in sources of drinking water.

Image: Black chokeberry (Aronia melanocarpa), a native shrub very high in antioxidants. (Source: ASLF)

Atlantic States Legal Foundation (ASLF), a non-profit organization based in Syracuse, NY, is promoting forestry and agroforestry as a method for improving water quality in the Great Lakes Watershed. Reducing nutrient pollution of streams and rivers that flow into the Great Lakes equates to protecting one of the most important freshwater resources in the world. ASLF has taken the innovative step to establish a non-profit urban tree nursery in Syracuse to provide native stock for regional projects, and these trees are available for purchase on a project-by-project basis.

For more detailed information on agricultural buffer zones, visit the USDA NRCS website (nrcs.usda.gov). To find out about innovative forestry projects in Onondaga County or how to order trees from the ASLF nursery, please visit aslf.org.

STATE EPF ROUND 23 GRANT RANKINGS

New York State announced results of the EPF 23 grant awards to Districts. Onondaga County did pretty well, **IMPRESSIVE**, again this year! Five of our seven applications were funded.

* Total Estimated Project Costs: $1.7 million
* NYS EPF Round 23 Grant Share: $938,020
* Farmer Cost Share: $730,876
* Local Match (OCWA, County Ag Council, SLWAP): $23,005
* SWCD Match: $41,182
* Number of farms assisted in addressing non-point source pollution: 16
* Number of Best Management Practices to be installed on farms: 87

It is great that we have a State and local community that is so supportive of agriculture!

WATER CHESTNUT (*Trapa natans)*

By Teresa Link, Crew Leader

Water Chestnuts are a non-native invasive species which originated in Europe, Asia and Africa. Released into the Northeast United States in the mid to late 1800s for decorative landscape purposes; water chestnuts are thought to have been introduced in Massachusetts first. By the 1950s the plant had made its way into the Great Lakes Basin.

T. natans grows in slow moving water bodies and in water depths up to 16'. The plants are annuals that can release 15-20 seeds per year which can quickly result in a large infestation. Floating seeds will not germinate, but green to greenish brown seeds will sink to the sediment and germinate. The seeds can remain viable for up to 12 years in the sediment which results in the need for repeated annual harvest for 5-12 years to control and eradicate population. As for biological control, parasites control the population in Europe, Asia, and Africa but a leaf beetle (Galerucella birmanica) has been studied for control in the US by Cornell from 2002-2005.

There are many issues that the water chestnuts can cause for boaters, swimmers, and the ecosystem. The dense, thick mats of vegetation can cause problems for boats driving through. The spiny, hard seeds can wash up on beaches where people may step on them. The mats of vegetation decrease light below water surface for other plants, thus choking out native aquatic plant species and causing a reduction in waterfowl food. At the end of the growing year, the dying water chestnuts fall to the bottom of the water body and decay. This decaying causes decreased oxygen levels for fish.

This summer OCSWCD sent out a crew of 4 college seniors to hand pull in the Seneca, Oneida, and Oswego Rivers. After 6 weeks, the crew hand pulled a total of 19.09 miles and collected approximately 13,770 pounds of water chestnut plants; about 720 lbs./mi. The plants and seeds taken from the Seneca will be taken to an OCRRA site in Camillus for composting. Funding for this important project has been provided through an Aquatic Nuisance Species Grant received by the Onondaga County Health Department, Division of Environmental Health under the direction of Dr. Russell Nemecek.

DISTRICT NEWS

WATER CHESTNUT CREW LEADER

By Teresa Link, Crew Leader

My name is Teresa Link and I am this year's crew leader for the Water Chestnut Pull. I am a 2016 graduate of ESF's Ranger School and am currently in the Renewable Resources Technology B.T. program at Morrisville State College. I am involved with the Conservation Tri-Society at Morrisville where I was secretary this past fall. My two favorite subjects are wetlands and forestry. I am also a captain for our Woodsmen's Team at Morrisville where we chop, saw, roll, and throw logs along with various other events. In April, I was honored to be the 1st woman to compete in the STIHL Timbersports Northeast Collegiate Women's Qualifier for Morrisville.

Aside from school, my family has a small farm where we make maple syrup, hay, and have a team of spotted draft horses named Mike and Dixie. I enjoy paddling, camping, and fishing the Adirondacks along with various local rivers during my down time. I look forward to the rest of the summer here at OCSWCD.

Meet this year's crew: (L_R) Teresa Link, Brenna Galligan, Jaden Clapper, and Mitchel Thomas, all ESF students.

MEET NEW EMPLOYEES

My name is Ron May. I started with the OCSWCD in July of this year as a Conservation District Technician. I recently graduated from SUNY Plattsburgh with a B.S. Environmental Science degree and a minor in Planning. While at SUNY Plattsburgh I played lacrosse, club ice hockey, and was a member of the fishing team. Beginning this Fall, I will be starting graduate school part-time at SUNY ESF to pursue a master's degree in Environmental Engineering with a focus in water resources. In my free time I enjoy hunting, fishing, working out and playing sports.

Throughout high school I worked summers on a produce farm in Central New York. I am looking forward to working for OCSWCD because it offers the opportunity to combine the knowledge I gained from my undergraduate studies with an interest in farm conservation planning. In addition to that, I am excited to be part of the effort to clean and protect our very important water resources in Central New York!

My name is Kim Clark and I have recently started as a Conservation District Technician for the SWLAP program. I grew up on a family dairy farm as well as managed the farm for several years after college. I received my bachelors degree in Environmental Science from the University at Buffalo as well as 25 credit hours in Watershed Management at SUNY ESF. I have an amazing little boy Benjamin, who keeps me on my toes! Karate, soccer and of course four wheeling at Gramma's. I am excited to get back to my roots in the farming and agricultural community as well as help to conserve and protect our land and water.

"It is our vision to live in a society in which future generations will have natural resources necessary to sustain and enrich their quality of life."

WOODY DEBRIS MANAGEMENT

By Mark Burger, Executive Director

OVERVIEW

Not all woody debris in streams is bad and not all should be removed. Each site is different. Generally, woody debris that is causing harmful flooding or diverting normal flow patterns are the types that should be removed. While flooding is an obvious problem if infrastructure or property is affect, in some situations flooding is not harmful and does not need to be addressed. Diversion of flows usually need to be addressed as over time it can cause streambank erosion or gravel bar formation that will de-stabilize the stream channel downstream.

Woody debris forms the base of the food chain for many stream systems and therefore some amount of woody debris is important to sustain life in the stream.

MANAGEMENT STRATEGIES

- In an effort to help address flooding and drainage issues in communities affecting private landowners and businesses, woody debris in all streams can be managed.
- THERE MUST BE NO DISBURBANCE OF STREAM BED AND/OR BANK.
- The goal is to protect fry in the gravel and to not silt in the fish eggs & baby fish (fry) so that they suffocate.
- On inland Trout streams, woody debris can only be managed between May 15 and October 1.
- On tributaries of the Finger Lakes, woody debris can only be managed between July 15 and October 1.
- If a tree creating woody debris is rooted in the bank, cut the stem so that the root mass/ball remains in the bank for stabilization purposes.
- If woody debris is cut and to be removed to nearby land, the landowner MUST be consulted and permission must be received. All woody debris must be removed to an area beyond the reach of high water.
- One-foot sections of debris can be cut and left in the stream to float away as long as it is of a small enough diameter so that it does not obstruct flow through down-stream culverts and/or create jams further downstream.
- If woody debris is to be removed from the channel, it should be cut into manageable sizes with a chainsaw then lifted or carefully dragged out to not cause turbidity in the water.
- Woody debris embedded in gravel will need a permit to be removed. Without a permit the woody debris can be cut at the gravel surface and removed.
- If the work exceeds this guidance, then contact the NYS DEC Habitat Biologist for a permit.

Steep banks and exposed tree roots were common on this reach of Butternut Creek.

FACTORS AFFECTING DECISION MAKING ON REMOVING WOODY DEBRIS

- Decisions should be made on a case-by-case basis. Factors to consider include location on:
- Stream width, does the woody debris block the entire channel width? If woody debris is blocking the entire channel, it could be removed.
- Is woody debris changing deposition pattern or diverting flows? It could be removed.
- Bends; if the woody debris is helping to stabilize the bank from erosive forces of water then leave it. If woody debris is increasing erosive forces on the bend/bank, then remove it.
- Pools, debris could be left to provide cold water habitat for fish
- Water depth; does the water have ample capacity to flow under the woody debris?
- Site access, will you cause more disturbance than the benefits of removing the debris?
- If the work exceeds this guidance, then contact the NYS DEC Habitat Biologist for a permit at (607)753-3095.

BIO-SECURITY
IS GOOD PRACTICE AT FARMS

By Mark Burger, Executive Director

The risk of disease transmission by people visiting farms is real. You may pose a threat not only to the animals on the farms, but also to yourself, coworkers or family. Following a few simple procedures can help you avoid these risks. Listed below are some things that our staff has been trained to follow:

- Always respect the farmers concern for bio-security.
- Utilize the heavy pullover boots when working in areas that have a chance for manure contamination.
- Disinfect your boots when you arrive on the farm as well as when you leave the farm. Wash buckets, scrub brushes and disinfectant are provided for each vehicle.
- Use the plastic disposable boots for guest visitors and/or for short trips to the farm.
- Other things that you should keep in mind are:
- Wash your hands with soap and water when leaving a farm
- Scrape heavy deposits of manure off of your person before leaving a farm.
- Wherever you go, be conscious of the potential for the transmission of disease, as it can be present in manure, urine, saliva, nasal secretions, blood, etc.
- Only visit the areas of the farm that you need to visit.
- Think about where you drive and park on the farm. Avoid driving through manure and barnyard runoff whenever possible. Wash your vehicle when these areas can't be avoided. Don't park dirty vehicles where there is likely to be animal and feed contact.

Traveling from farm to farm requires bio-security practices, as in these disposable plastic boots.

ONONDAGA COUNTY SOIL & WATER CONSERVATION DISTRICT

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NEW YORK STATE DAIRY PRINCESS

By Doug Fisher, Program Manager

Photo courtesy of American Dairy Association North East

Congratulations to Sarah Rohe of Onondaga County who was crowned the 2017-18 New York State Dairy Princess. Shown here is Sarah receiving her crown from outgoing state princess Emily Ooms of Columbia County. On Saturday June 3rd, the 2017 Dairy Princess Banquet was held at Inn of the Seasons where Zoie Skinner was crowned 2017-18 Onondaga County Dairy Princess.

IF YOU EAT, THANK A FARMER

IN CASE OF AN AG SPILL EMERGENCY, PLEASE CALL MARK BURGER 315-415-5057

DO YOU REMEMBER?

By Maggie Connelly, Secretary

The history of the SLWAP and farm project records are kept neatly in file cabinets; over time, names and faces have changed while many have stayed the same. Adjustments and policy changes have been made to the program; there are a lot of good pictures in the old newsletters, though we don't have the originals and that surely is a shame. Now is a good time to remember the what, when, who and why of the SLWAP.

- March 1, 1994, the first step - in response to the amended Clean Water Act of 1986, an Ad Hoc task force was formed to develop a Whole Farm Planning program for the Skaneateles Lake drinking water supply for the Syracuse metropolitan area, concentrating on agricultural land. The driving force behind the program was pathogens, Giarda and Cryptosporidium in livestock. Best Management Practices were established to reduce these risks on farms, and if successful, the City of Syracuse would avoid the impact of a water filtration plant.
- July 1, 1994: The task force presented its final recommendations to then Syracuse Mayor Roy Bernardi.
- October 1, 1994: Official program start date...it's a go! The City of Syracuse set aside funding for a watershed agricultural protection program in the watershed to include implementation and maintenance of Best Management Practices on farm businesses pertaining to water quality. Wow, ready in just 6 months!
- March 1, 1995:
  - Farmer informational meetings were set up; 42 farmers attended presentations of the new 5-tiered approach to a Whole Farm Plan. Staff was introduced and ready to answer questions.
  - A review committee was established, WAPRC, or Watershed Agricultural Program Review Committee. Original members were, Mark Tucker, S. Albert Sweetland, Bunt Osborne; Mike Franklin, Jeff Riehlman, Lee Macbeth [Neville], Jim Greenfield; Steve Nemec, Joe Barry, and Dale Kehoe.
  - The first "Watershed Journal" newsletter was published in the spring of 1995.
  - June 1998 - Skaneateles Lake won 2nd place award for "Best Tasting Drinking Water"!
- Primary principles of the program:
  - Participation is voluntary
  - The farmer is a full partner in the development of a water quality plan for their farm.
  - The farmer can veto any part of the plan.
  - The farmer will receive financial reimbursement for time spent on developing a plan with the project team.

The project team and WAPRC brainstorming - one of the few pictures we have of those early meetings. This one taken in 1997.

Continued next page

Our vision - The Skaneateles Lake watershed will be an environmentally sound region, where a viable agricultural industry and others benefiting from the lake work together harmoniously to improve and maintain a high standard of water quality.

Our mission - To carry out a cost-effective, innovative program for the farming community that upholds the high drinking water quality standards of Skaneateles Lake.

* The City of Syracuse will pay for implementation of the plan.
* The farmer will not be asked to bear any negative financial impact as a result of a plan.
* The plan will be a state-of-the-art conservation plan that would meet all current Federal regulations.
* The SLWAP developed its program following the format of the New York City watershed program, becoming the second pilot program in the state.
* Too good to be true? Yes and no.
* The water quality plans may have to be a compromise between the farmer and the project team, but not between the farm's business objective and the program's water quality objective. Both can be met if we work together.
* Some BMPs in a plan may require some getting used to, and some extra effort to maintain. But in the long run, the farmer's voluntary participation in the program will benefit the farm and the quality of Skaneateles Lake.

These principles are still the same today. The program's success stories are a testament to the spirit of cooperation and community that has existed for 23 years!

WHOLE FARM PLAN
Emergency Plan

By Maggie Connelly, Secretary

The Operations & Maintenance section is near the back of a Whole Farm Plan binder, along with the Emergency Plan...BUT when was the last time you read through this information?

- Do you have copies of the emergency phone numbers handy, and are all the names & phone numbers up-to-date?
- Have you reviewed your emergency plan with your family and co-workers?
- Have you notified the SLWAP of any changes to your emergency plan?
- This aspect of a Whole Farm Plan is discussed usually every year during review time. However, information can change quickly and it's important to not break the link of communication. So, keep this info up-to-date because you never know when or how quickly you'll need it.

SKANEATELES LAKE WATERSHED AGRICULTURAL PROGRAM

Watershed Agricultural Program Review Committee (WAPRC)

Mike McMahon, *Chair, Cortland Co.*
Steve Nemec, *Vice Chair, Cayuga Co.*
Craig Richards, *Onondaga Co.*
Ed Tidd, *Onondaga Co.*
Eric Brayman, *Onondaga Co.*
David Perry, *Cortland Co.*
Gaelen Head, *Cayuga Co.*
Rich Abbott, *City of Syracuse*
Dale Kehoe, *Counsel member*
Jim Greenfield, Counsel member

Staff

Mark Burger, *Program Manager*
Eric Jensen, *Farm & Nutrient Management Planner*
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EQUIPMENT RENTAL PROGRAM

By Maggie Connelly, Secretary

Both the WAPRC and the District Board of Directors approved the sale of the SLWAP conservation equipment via the bidding process. The no-till drill sold for $16,800 and the planter $18,260.

Through a Request for Proposal, the SLWAP is purchasing a new no-till drill only, one that has a swing arm, 8.5' wide for easier transport but with a 12' wide working width for the field..

The Skaneateles Lake Watershed Agricultural Program is a cooperative effort between the Soil & Water Conservation Districts and Cornell Cooperative Extension Associations of Onondaga, Cortland and Cayuga Counties, the USDA Natural Resources Conservation Service, the City of Syracuse, and Skaneateles Lake watershed farmers. Principal funding provided by the City of Syracuse.

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