



# ON-FARM VERNAL POOL CONSTRUCTION AND FOREST BUFFER PLANTING

A family farm keeps their streams healthy by building community stewardship

## PROJECT GOALS

Heritage Pastures Farm, owned and operated by the Hobbs Family, embarked on a project with Tioga County Soil and Water Conservation District (SWCD) and the Upper Susquehanna Coalition (USC) to widen the riparian forest buffer along their stream, create vernal pool habitat and add onto the existing rotational grazing system for their beef cows.

## COMMUNITY AND ECONOMIC BENEFITS

- Planting trees and shrubs along a stream increases soil stabilization, which reduces streambank erosion and the repair costs associated with damage from high-water events.
- Healthy riparian zones protect downstream areas from flooding by providing places for floodwaters to slow down and infiltrate the ground.
- Volunteers learn about conservation and restoration activities that make streams healthier and meet farmers who are willing to implement these practices.
- Instituting a rotational grazing plan enhances a farm's resiliency during weather extremes by improving herd health, reducing supplemental feeding costs and improving a farm's soil health.

## ENVIRONMENTAL BENEFITS

- Trees and shrubs reduce the amount of nutrients and sediment leaving the landscape by providing natural water filtration, reducing erosion and helping soils to absorb and retain nutrients.
- Riparian forest buffers and vernal pools provide important habitats for wildlife.



Benjamin Hobbs helping one of the Ranch Riders 4-H Club members plant a tree in the buffer on his family's property. (Photo: Tioga SWCD)

“ These types of projects are win-win for the District as they protect our local natural resources, assist the farm in their stewardship goals and improve the quality of water that leaves New York and ultimately flows to the Bay. The flexible funding and many partners involved made it possible to do this great work and we look forward to doing similar projects in the future.”

**- Danielle Singer**

*Tioga County Soil and Water  
Conservation District*

## ENVIRONMENTAL BENEFITS

- Tree canopy over streams provides cooler water temperatures and a food source (leaf litter) for aquatic life.
- Rotational grazing techniques improve soil health in pastures, which allows for better water infiltration, more water retention during drought, increased carbon sequestration and enhanced uptake of nutrients by pasture grasses.

## CONSERVATION PROJECTS INSTALLED

- Riparian forest buffer.
- Vernal pool.
- Rotational grazing plans

## PROJECT SUMMARY

Using USC Water Quality Program funds, the USC Wetland Team helped the Tioga SWCD and the landowner construct the vernal pool adjacent to the stream, as well as the buffer to provide diverse wildlife habitats. The New York State Department of Environmental Conservation (NYSDEC) Trees for Tribes Program provided the buffer planting stock and materials. The planting stock was received by Tioga SWCD in spring 2019 and was potted up for the summer by the Ranch Riders 4-H Club. In fall 2019, the 4-H Club, along with the Owego Rotary Club, helped plant the stock at the farm along the stream. It was a great experience for the kids to help plant the small bare root stock in nursery pots in the spring and then, in the fall, plant the same stock after a summer of growth. The students enjoyed seeing the completed project, and they knew their hard work had paid off.

## THINGS TO CONSIDER

- Maintenance is needed in the buffer for three-four years while the plants become established.
- Planting riparian forest buffers sometimes removes land from production, but this loss is often outweighed by the added resilience to extreme weather and the reduction of flooding impacts.

## THE PARTNERS AND FUNDING SOURCES

- Upper Susquehanna Coalition.
- Tioga County Soil and Water Conservation District.
- NYSDEC Trees for Tribes Program.
- Ranch Riders 4-H Club.
- Owego Rotary Club.
- National Fish and Wildlife Foundation.

## CONTACTS

👤 Tioga County Soil and Water Conservation District, 183 Corporate Drive Owego, NY 13827

📞 (607) 687-3553



The new fence and planted forest buffer along the stream (Photo: Tioga SWCD)



Vernal pool. (Photo: Tioga SWCD)