

Confluence

Spring 2020



Welcome

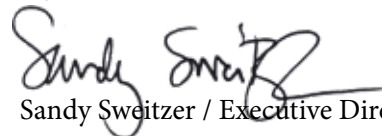
In just over a month, years of hard work will culminate in the April 25th Grand Opening of our newest preserve and largest in Wake County, the 405-acre Bailey and Sarah Williamson Preserve. Our most ambitious project to date, this preserve embodies all four of our conservation public benefits for you: safeguarding clean water, protecting natural habitats, supporting local farms and food, and connecting people with nature. We have planned an incredible Grand Opening celebration that includes guided walks, bike rides, local food, farm tours, and a star party!

In this Confluence, you'll notice a common theme: resilience. From protecting important flood control systems like Brogden Bottomlands to implementing more sustainable farming methods at Williamson Preserve, we're taking steps both big and small to improve the resiliency of our region. As climate change brings more rain, storms, and higher temperatures, the natural spaces TLC protects (with your support!) are vital to community wellbeing. It will

take all of us to ensure our community remains healthy and vibrant in the face of climate change.

As you well know, as the Triangle grows, there are more challenges to meet the needs of our entire community. Through partnerships with Wake County and NC State, TLC will help close gaps in the local food system by providing space for beginning farmers to grow food sustainably at Williamson Preserve.

The Grand Opening of Williamson Preserve coincides with the 50th anniversary of Earth Day, a celebration of the place we call home. With your support, we're able to protect our region's green spaces with more urgency than ever before as we work toward conserving 25,000 acres by 2025. Thank you, and see you on April 25!



Sandy Sweitzer / Executive Director



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A photograph of two young women standing in a forest. The woman on the left is wearing a grey t-shirt with a graphic and a black jacket tied around her waist. She is holding a shovel. The woman on the right is wearing a green t-shirt and a black jacket tied around her waist. She is also holding a shovel. They are both smiling. The forest floor is covered in dry leaves and pine needles. There are some small plants and a grey bucket on the ground. The background is filled with trees and green foliage.

Our Vision

We see the Triangle region as an increasingly healthy and vibrant place to live where wild and working lands are protected and everyone has access to open space, clean water, and local food.

Students at Knightdale High School spent a few hours at Bailey and Sarah Williamson Preserve for a school project last spring. They were among the hundreds of people who have helped prepare the preserve for its Grand Opening on April 25.

Photo: Ana Caicedo Macia



Mature cypress trees at Brogden Bottomlands.
Photo: Leigh Ann Hammerbacher

Largest conservation project key for region's resiliency

By Ron Gallagher

In October, TLC secured its largest land conservation project ever — 1,120 acres in Johnston County known as Brogden Bottomlands. This project maintains an important wetlands ecosystem that helps protect the Neuse River for downstream users and is a significant addition to the protected lands in an Audubon-identified Important Bird Area. Just 35 miles southeast of Raleigh and 5 miles southeast of Smithfield, Brogden Bottomlands will eventually be part of the Mountains-to-Sea Trail.

“This property is a refuge for wildlife and serves as a reservoir for stormwater in a rapidly developing area of the state. It serves as a key habitat corridor in our region and is also a carbon sink, absorbing more carbon than it releases,” said Leigh Ann Hammerbacher, senior

3 | *Confluence* Spring 2020

associate director of conservation. “As our population continues to grow, conservation of properties like this are essential for our region’s resiliency.”

The Brogden Bottomlands acquisition protects prime farmland, upland forest areas, and a unique brown-water swamp. It protects over 2 miles of Neuse River frontage, and 13,000 feet of streams feed the river along the property, including many vernal pools and wetlands. The property includes rare oxbow lakes dotted by mature cypress trees as well as sloughs, streams, and a massive 650-acre floodplain.

That floodplain is one of the most important types of natural areas to protect to help control downstream flooding, which is key to maintaining a resilient landscape. Flooding of the Neuse has drawn a lot of media attention in recent years after storms that have devastated many communities.

This property is critical for absorbing stormwater and floodwaters, and the area acts as one of the largest natural water-pollution and flooding control systems on the river. It also filters impurities from the Triangle's urban stormwater runoff.

The 43,000-acre Upper Neuse River Bottomlands Important Bird Area in which TLC's new acquisition lies, is unusual enough that the green swath can be noted from space, said Curtis Smalling, conservation director for Audubon North Carolina. Decades of growth in Wake County have pushed development pressure into Johnston County, and sand-mining operations within the area have changed rich forest habitat into lakes, according to Smalling.

"We've lost a lot of our bottomlands in the Southeast over the last 200 years," he said.

In a way, Smalling said, Brogden helps "connect the dots" of preserved lands that include TLC's 405-acre Bailey and Sarah Williamson Preserve, which opens to the public on April 25.

The purchase of Brogden Bottomlands also makes TLC and Johnston Community College's Howell Woods Environmental Learning Center neighbors as well as partners in conservation. Jordan Astoske, Howell Woods Director, said the organization already has a working relationship with TLC and Audubon.

"Johnston Community College has had a longstanding commitment to conservation," Astoske said. The facility that is officially known as the Rudolph Howell & Son Environmental Learning Center is used for wildlife and forestry management, outdoor recreation, hunting, and environmental research.

A long-time priority

TLC has been interested in protecting Brogden Bottomlands nearly since the organization's founding in the early 1980s because the land is important locally and regionally as wildlife habitat. Hammerbacher said



Northern Parula, a frequent summer resident in the Upper Neuse River Bottomlands.
Photo: Will Stuart, Courtesy of Audubon North Carolina



Photo: Rupert Hester



that her research on the property turned up a development plan that had been drawn about 50 years ago.

More recently, a 100-home subdivision has been built about a mile away, and nearby tracts of lowland forest have been clear cut, Hammerbacher said.

The area around Brogden is hardly wilderness. There have been homes there for many years and a spur railroad line that brought goods to a small settlement known as Grabtown because it was where people could grab supplies they needed. Grabtown is also where actress and singer Ava Gardner was born.

A no-interest loan from private donors enabled TLC to acquire the tract. Now TLC is working to secure private and public resources so the preserve can be opened for public use. As a future part of the Mountains-to-Sea Trail, there will be opportunities for hiking and walking.

Birding will also likely be a popular activity.

Audubon's Smalling said the bottomland forest is excellent habitat for several migrating warblers and the summer tanager. Mississippi kites nest there, he said. The northern parula, pictured on the previous page, is also a common summer visitor.

Mammals that need the habitat include fox squirrels, black bears, and bobcats.

Coincidentally, TLC was able to announce the record acquisition just when the National Land Trust Alliance's annual Rally event was bringing more than 2,000 conservationists and land-trust employees to Raleigh for the first time.

"Last year, we set a goal to double the pace of conservation in the Triangle by protecting 1,000 acres per year until 2025," said TLC Executive Director Sandy Sweitzer. "With the protection of this property and the support of the community, we are confident we will achieve that." 🌿



Cattle moved in at Bailey and Sarah Williamson Preserve in late 2019. Photo: Deja D. Smith

Farming to mitigate the effects of climate change

Information courtesy of Regenerative Design Group

You might have seen the term “regenerative agriculture” lately — it encompasses farming methods that are a combination of practices and land ethics borrowed from indigenous and organic farmers, conservationists, and ecological designers. By taking a regenerative approach, farmers help build healthy soils, protect waterways, increase biodiversity, improve animal and crop health, and increase overall farm resilience.

At Bailey and Sarah Williamson Preserve, farmers will be using regenerative methods to help mitigate and reverse the effects of climate change. Industrial-conventional agriculture models have focused on

single-crop operations that have exceeded the natural carrying capacity of the land, ruining soil, water, habitat, and air quality. Regenerative methods seek to reverse some of this damage by rebuilding degraded soils, increasing biodiversity, and creating healthy, fair, and just food systems.

Already at Williamson Preserve, Jake and Catherine Newbold — owners of Newbold Farms LLC — are employing regenerative methods in their

*“The four biggest things to know (about regenerative farming) are: limit tillage, protect soil, biodiversity, and animal grazing.”
— Jake Newbold*

cattle operation. As Jake explains in more detail in the following Q&A, low tillage, diverse cover crops, and on-farm fertility like manure help build carbon-rich soil. According to Project Drawdown, a global research organization that reviews, analyzes, and identifies the most viable global climate solutions, farms employing regenerative agriculture methods are seeing “soil carbon levels rise from a baseline of 1-2% up to 5-8% over 10 or more years, which can add up to 25 to 60 tons of carbon per acre.” Having that carbon in the soil improves its overall health and water retention capacity while reducing the amount of carbon dioxide in the atmosphere.

The Newbolds use strip grazing, so every weekend, they move the cows to an area — or a strip — with fresh grass to graze. They then fence off the area where their cows grazed previously so the grasses there can grow back. These methods will eventually be coupled with silvopasture, which integrates pasture and trees into a single system for raising livestock. This practice has been shown to sequester five to 10 times as much carbon as a treeless pasture of similar size.

Below, the Newbolds explain their farming operation. They have six cows at Williamson Preserve thanks to a partnership with TLC, NC State University, the Center for Environmental Farming Systems, and NC Choices. Their answers have been condensed and lightly edited. The full transcript is available at triangleland.org.

What drew you to cattle farming? And to using regenerative methods for your farm?

Jake: (My wife and I) were both raised very agriculturally minded to where we were both aware of where food was coming from and how it was produced. We’re also definitely animal lovers, and I’ve always had an attachment to cattle. As for regenerative methods, they lower our input costs. With the strip grazing lines out there, we’re making those cows eat all the grass in a certain section before they have access to a new section, so this winter, we haven’t had to feed them any hay.

Catherine: (Regenerative methods) are also helping build the soil back.



It’s been sitting vacant, so with the cows being on it, we’re building up the soil’s profile in a natural way which decreases our cost with fertilizer and lime.

How many cattle would you like to have out at Williamson eventually? What are your goals for your farming?

Jake: Right now with the pasture that TLC has slated for Newbold Farms, I think we can easily hold 10 brood cows, which are the cows that produce a calf for us every year. By the end of 2020, we hope to sell three steers directly to community members. Our claim to fame is going to be local beef!

What's a typical day like for you at Williamson?

Jake: Both Catherine and I have full-time jobs, so the farm is definitely part-time, even though it can feel full-time. I make it a point to lay eyes on every cow, every day. My wife and I refer to ourselves as flashlight farmers, because with the end of daylight saving time, we have to check cows in the dark. So as far as a day out on Williamson, I come in early in the evenings after work and check all the cows and make sure everyone is doing good. The second thing I always do is walk through the pasture. Some of the things I'm looking for are the length of the grass — I have to make sure nothing is getting overgrazed. The other thing I'm watching for is high traffic areas and if there's anything I can do to control those. Another thing we always check on is making sure they have a good water source.

What do you want people to know about regenerative farming and cattle?

Jake: The four biggest things to know are: limit tillage, protect soil, biodiversity, and animal grazing.

When you till the land, you open the possibility of erosion. If you can limit that as much as possible, you're doing yourself a favor, and it comes back to the next point, soil. The soil profile takes forever to create. The first couple inches of that soil profile are the most important, and if you haven't been protecting that soil or if it has been in conventional tillage, that soil has been threatened and often it's not as productive as land that hasn't been tilled. The biodiversity aspect is when you can introduce different cover crops. You've got different forages that can aerate the soil, you've got legumes that can provide nitrogen and add carbon. I always like to refer to it as a salad bar for our cows. When introducing animal grazing, the cows are taking the forage or the green part of the plant off the pasture, but they're returning it in the form of manure and even urine. All the excess forage gets trampled down; this and the manure is going to hold moisture in that soil. The moisture is important to allow microorganisms to work together, and everyone can be one big happy family.

Why do you think it's important to raise and sell local meat?

Jake: I think when you can shop local, eat things local, it creates sense of community and always helps those small communities thrive. Now for benefits to a consumer, whenever anyone comes to buy beef, they are invited out to the farm. We will roll out the red carpet and show them anything they want to see; they can come pet a cow if they want to. We're going to be very transparent. I also know the quality is going to be better than store-bought.

Catherine: We're farming in Wake County and bringing beef to people all throughout the Triangle, and it brings that sense of pride and shows that other people can do it. We hope that people will be able to see how we were able to start. We also really pride ourselves in taking care of these animals. All our brood cows have names!

Jake: The brood cows do all have names ... and they'll never go to a processor. We really do take pride in having happy animals. The bull calves, which get turned to steer calves, they get different names, like Rib eye, Steak fajita, and T-bone.

Catherine: We really do this for those animals. Everything we do is for them. 🌱

Growing New Farmers

In 2017, Wake County adopted the Moving Beyond Hunger Plan, a food security plan to ensure everyone has access to fresh, local food. The county identified a need to make more farmland accessible to new farmers as the county's population continues to increase. TLC has partnered with the county to provide land for new farmers at Williamson Preserve, where they will be farming a variety of crops using sustainable methods. Eventually, Williamson Preserve will serve as an established model of regenerative agriculture that offers educational programs.



'Tree of the future'

Hundreds of years ago, from the Triangle to the coast, millions of acres of longleaf pine towered over green and golden grassland. Lightning-caused wildfires eliminated the mid-story while savanna grasses, low shrubs, and herbaceous plants thrived as habitat and nutrient sources for thousands of species under longleaf pine trees.

Healthy longleaf pine ecosystems are second only to the rainforest in biodiversity. Today, only about 3 million acres of native longleaf pine remain of the original 93 million acres that covered the Southeast. As more people have come to appreciate the incredible biodiversity hosted by this ecosystem, restoration and conservation efforts have increased. TLC is restoring longleaf pine at Bailey and Sarah Williamson Preserve, where the sandy uplands were once covered by the tree.

“Longleaf is a tree of the future rather than the tree of the past,” said Julie Moore, founding board member of The Longleaf Alliance. “It’s more disease resistant. It can take extreme conditions, very dry, very wet, and major winds.”

Longleaf pine has had to overcome centuries of challenges. The Triangle lies in the western most reach of the tree’s range in North Carolina, a state so connected to the tree that it’s referred to as “the land of the longleaf pine” in the official state toast. In the 19th and 20th centuries, when pine resin was an integral part of the naval industry, longleaf pine trees were tapped to make tar and turpentine. Stands were later clear cut for agriculture and virgin timber, especially in the Piedmont region. Longleaf pine is often thought of as a sandhills tree, but that’s only because the sandy soils there weren’t as suitable for other agriculture.

Later in the early 1900s, after a growing public fear of wildfires, the U.S. Forest Service adopted a strategy of suppression and prevention, which affected the health of longleaf forest ecosystems. Longleaf pine forests require fire to become established and thrive. The fire-intolerant loblolly pine, which supports much less wildlife, grew in moist habitats and started to replace longleaf forests.

For decades, few were inspired to do anything about the dwindling range of native longleaf pine, Moore said. But in the 1980s, ecologist Joan Walker's Ph.D. work in the Green Swamp in Brunswick County demonstrated the high number of species living in a well-burned longleaf pine forest. Once conservationists realized the biodiversity made possible in a regularly burned forest of a single tree species, restoration efforts increased dramatically throughout the South.

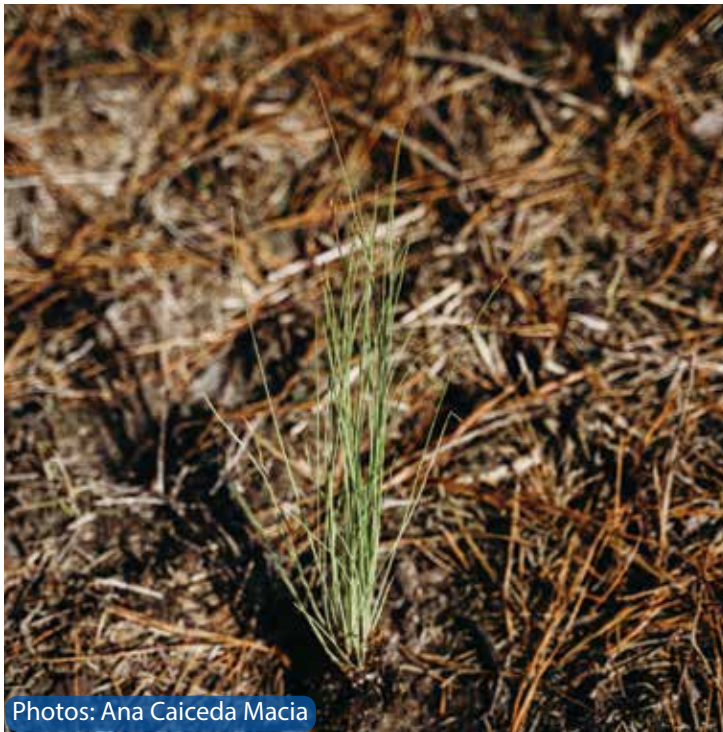
"Today we know how to produce longleaf seedlings with high survival rates, the various techniques for planting them, and how to suppress competitive native and nonnative species," Moore said.

At Williamson Preserve, TLC volunteers and staff planted about 3,500 longleaf pine seedlings during a workday with Appalachian Mountain Brewery and The Longleaf Alliance in February 2019. These organizations continue to partner to restore this important ecosystem, including during a second workday in 2020. Yearly prescribed burns

will help this habitat build up again in an area that for hundreds of years was used as farmland. There are challenges ahead to recreate the distinct ground cover of grasses, herbs, and low shrubs.

But longleaf pines are resilient, and they grow deep tap roots — both in the ground and in the history of North Carolina. In the land of the longleaf pine, people care about the future of the tree. Just down the road in downtown Raleigh, The Longleaf Hotel is supporting restoration efforts in the Triangle.

With some care, longleaf stands will thrive again, and with them, so will the savanna grasses and the incredible number of species attracted to the open, sunny conditions. In a few decades at Williamson Preserve, the seedlings, looking like grass right now, will stand tall, filtering light through their long green needles and casting a glow over all the life on the ground. 🌲



Photos: Ana Caiceda Macia





It takes a **community**
to **conserve**.

**Thank you to everyone who has
included TLC in their estate planning!**

To learn more about including TLC in your bequest,
please contact Director of Advancement Christine
Wilson at 919-908-0059 or cwilson@triangleland.org.

**We've expanded Brumley, and we need
your help to build new trails for biking and
walking! Make your gift today.**



triangleland.org/brumleyeast



We're a certified Volunteer Service Enterprise organization!

Two years since starting the process, TLC has been certified as a Service Enterprise by Points of Light, the world's largest organization dedicated to volunteer service! Through this process, we've improved how we engage and appreciate our volunteers. We're so thankful for our talented supporters!

What's New at TLC

TLC on track with more than 20,100 acres conserved

In order for TLC to conserve 25,000 acres by 2025, staff are hard at work closing conservation easements, applying for grants, and seeking out new properties. We ended 2019 strong with the conservation of 120 acres in Johnston County, and as of mid-February, we've conserved more than 20,100 acres!

Saying goodbye to George and Nate

In the first two months of 2020, we bid farewell to George Jones Jr. and Nate Burns as they started jobs at new places. George, former senior conservation manager, is now the executive director of Farmer Foodshare in Durham. Nate accepted a position at an electrical engineering company. We will miss them and wish them the best!

Eno-New Hope Connectivity Plan finalized

TLC was part of a collaborative effort to develop the Landscape Plan for Wildlife Habitat Connectivity in the Eno River and New Hope Creek watersheds. Local governments, conservation groups, universities, and ecologists identified areas where land protection is needed to help wildlife travel between these important watersheds. Habitat connectivity is critical for biodiversity, as it helps wildlife maintain their genetic diversity by finding food, water, and mates.

Upstream Matters campaign runs strong through first phase

TLC joined several local conservation partners to build support for protecting the Upper Neuse River. While this campaign specifically focuses on the Upper Neuse River Basin and City of Raleigh water ratepayers, we hope it will build awareness about the connection between land conservation and clean water in the Triangle. 🌿



A shot of one of the properties conserved in Johnston County.
Photo: Leigh Ann Hammerbacher



Conserved properties like Brumley Forest Nature Preserve in Orange County help keep water clean for Raleigh and surrounding towns. Photo: Sonke Johnson

Illustration: Lauren Burnham

Wild Ideas for Farms and Forests

MARCH 12 at 6:30 PM

NC Museum of Natural Sciences
Nature Research Center

Free local food and beer!

Register at triangleland.org/wildideas

Climate change may seem like an insurmountable problem, but at *Wild Ideas for Farms and Forests* we'll explore how to address gaps in the local food system using regenerative farming practices to sequester carbon while supporting our local food scene and inspiring a love for the outdoors. *Wild Ideas for Farms and Forests* will also highlight the crucial work of partner organizations and community leaders who are working alongside one another to build thriving and healthy communities around the Triangle. We hope you'll leave with wild ideas about how you can build climate resilience at home and work. triangleland.org/wildideas

Thank you to our Wild Ideas sponsors!



Upcoming Events

We have a busy spring ahead! To help get ready for our April 25th Grand Opening at Bailey and Sarah Williamson Preserve, we're hosting volunteer workdays on Wednesdays and Saturdays. Please register online at: triangleland.org/events.

MARCH

- 12 Wild Ideas for Farms and Forests** NC Museum of Natural Sciences | 6:30-9pm | Come learn about how area groups are addressing gaps in the local food system using sustainable methods. Free food and drinks! Register and learn more at triangleland.org/wildideas
- 14 Stewardship Saturday** Bailey and Sarah Williamson Preserve | 9am-12pm | Farm Manager Eliza Lawdley is hosting volunteer workdays on Saturdays to help prepare for the Grand Opening on April 25! Browse workday dates at triangleland.volunteerhub.com
- 18 Williamson Wednesday** Bailey and Sarah Williamson Preserve | 9am-12pm | Join us for our weekly Williamson Wednesday workday. We need your help to prepare for our April 25th Grand Opening! Browse all volunteer opportunities at triangleland.volunteerhub.com

APRIL

- 22 TLC Giving Day** #NatureNeedsTLC | On this 50th anniversary of Earth Day, join us in raising \$50,000 in 24 hours as we work to accelerate the pace of conservation in the Triangle! triangleland.org/donate
- 25 Grand Opening of Bailey and Sarah Williamson Preserve** | 9am-9pm | A full day of guided walks, bike rides, local food and beverages, kids' activities, and more! Celebrate with us on this special opening day! triangleland.org/grandopening





Save the dates!

April 22

TLC Giving Day

24 hours, \$50,000 for the
50th Anniversary of Earth Day!

April 25

Grand Opening

Bailey and Sarah Williamson Preserve

Day-long celebration with guided walks,
local food, a star party, and more!

triangleland.org/grandopening