

## Town of Carrboro Legacy Tree Fund Grant

### Henry "Hank" Anderson III Community Park Riparian Buffer Restoration – Project Narrative

#### **1. Describe your project.**

The Town of Carrboro is requesting funding to plant trees to restore the riparian buffer of an intermittent stream in Hank Anderson III Community Park. The stream is located between two ball fields in an open area populated by turfgrass and non-native species, as well as seven sugar maple (*Acer saccharum*) trees and one American elm (*Ulmus americana*) tree.

In addition to planting trees, staff plan to incorporate additional measures to restore the stream buffer in this location. The area is located near a parking lot and experiences runoff from precipitation events. Staff plan to install stormwater control measures near the parking lot to slow runoff into the stream and improve infiltration.

Staff also plan to plant native pollinator-friendly species along the stream buffer and seed the buffer with a native riparian seed mix. These plants will provide food and habitat for native pollinators and other wildlife species. Carrboro is committed to creating sustainable habitat for native pollinators through the Bee City USA program.

Staff plan to incorporate informative outreach materials into the project. These materials will include educational signs for tree identification as well as signs which describe the benefits of vegetated stream buffers and pollinators. Staff are designing a structure which residents can use to place a phone or camera to take photographs and contribute to a time-lapse of tree growth along the stream. Staff will also designate a site along the stream for residents to collect data as citizen scientists by making observations for the National Phenology Network.

The trees planted along the riparian buffer will sequester carbon and help Carrboro reach goals outlined in the Town's 2017 Community Climate Action Plan to reduce in greenhouse gas emissions and protect and enhance Carrboro's natural ecosystems.

Staff plan to organize and host two volunteer planting events for this project. The first event will be held in the fall to plant trees along the stream buffer. The second event will be held in the winter for staff and volunteers to install biodegradable coir matting along the stream and plant live stakes.

The project can be categorized as a natural area planting related to water quality improvement. Staff will purchase the trees and recruit volunteers using the Town's established volunteer networks. Staff in the Public Works Department will work to water and maintain the trees.

#### **2. How will your project be maintained? Who will be responsible for the trees during the first 3 years after planting?**

The Town of Carrboro Public Work's Landscaping and Grounds Division maintains the landscaping within all town parks including Anderson Park, and will maintain trees planted with this funding. The trained and certified crews perform maintenance and inspections at Anderson Park weekly. This stream buffer planting will be maintained in accordance with current ISA ANSI standards and the Water Quality Buffer Regulations in the Town's Land Use Ordinance, which exceeds the requirements of the Jordan Lake Rules for Stream Buffers. This will include removal of trash, invasive control, and replacing of plantings as needed in perpetuity. Tree staking, if needed, will be removed at the earliest opportunity to ensure proper trunk and root strength, usually after one growing period. Pruning at time of planting and for the life of the trees will be done in accordance with the ISA ANSI standards. Any work requiring professional assistance will be directed and/or performed by an ISA Certified Arborist. Carrboro also

participates in the Tree City USA program and meets the four core standards of sound urban forestry management yearly.

### **3. Who owns and manages the property where the trees will be planted?**

The Town of Carrboro owns Hank Anderson III Community Park, where the trees will be planted. The park is located near the western edge of the Carrboro city limits along a State Highway NC-54. Two schools in the Chapel-Hill Carrboro City School system, McDougle Elementary School and McDougle Middle School, are located approximately one-quarter mile to the northeast of the park. The area to the east of the park is occupied by suburban neighborhoods, while the area to the west of the park is more rural, with a lower population density. Currently, there are seven sugar maple (*Acer saccharum*) trees and one American elm (*Ulmus americana*) along the intermittent stream at the project site.

### **4. Why do you want to do a tree planting project?**

The Town of Carrboro hopes to plant trees as part of a larger-scale project to create pollinator habitat, improve water quality, install stormwater control measures, and provide education and outreach to Carrboro residents.

Carrboro is dedicated to creating and enhancing sustainable habitat for native pollinators through participation in the Bee City USA program. Restoring the riparian buffer on the stream will create habitat for pollinators and other wildlife, such as migratory birds. In an analysis of tree cover within the Town, staff found that Carrboro lost approximately 4% of its tree canopy between 2002 and 2010. The Town plans to increase the tree canopy and fulfill Bee City USA commitments using trees planted with this funding.

This project will also address stormwater concerns in Carrboro. In 2017, the Town created a Stormwater Utility to better address drainage, flooding, and infrastructure concerns and resilience in consideration of hydrologic changes associated with climate change. Trees along this intermittent stream will slow overland flow and improve infiltration, which will help reduce flooding downstream. The intermittent stream is a tributary to Morgan Creek, which experiences erosion and flooding from storm events.

The Town also plans to expand this project by incorporating additional stormwater control measures. The stream runs perpendicular to a parking lot, and staff plan to install a dissipation pad at the parking lot's outfall to slow the flow of storm runoff.

The stream within the project area falls within the University Lake watershed. University Lake is one of the primary water supplies for Carrboro residents. Restoring the riparian buffer will filter pollutants and nutrients entering the lake and reduce water treatment needs.

By sequestering carbon and restoring the stream's riparian buffer, the trees planted with this funding will also help Carrboro reach the climate action and ecosystem protection goals outlined in the Town's 2017 Community Climate Action Plan. This plan outlines goals for mitigating the effects of climate change by pursuing emissions reduction and ecosystem resilience throughout the community. Specific recommendations in the plan include conserving trees, increasing the Town's tree canopy, and pursuing restoration projects along local streams from changes in rainfall due to climate change.

Public education and outreach about the benefits of trees and their role in providing ecosystem services will be a significant focus of the project. The site will contain interactive outreach stations and opportunities for Carrboro residents to collect data as citizen scientists. Staff will create informative signs to describe the benefits of trees and the ecosystem services they provide. Signs will discuss topics including water quality buffers and pollinators. Staff also plan for the outreach to include an interactive

element involving citizen science and photographs. Additionally, if the Town obtains funding, staff anticipate hosting a tree care workshop in the fall.

**5. How does your project promote volunteerism? How many volunteers and/or staff members do you expect to attend the tree care workshop and how many will participate in the tree planting? How will you recruit volunteers to plant the trees?**

Conservation of natural resources is a strong value in the Carrboro community. Many residents in the Town are dedicated to improving the health and resilience of the community's natural ecosystems and educating others on this topic. In 2019, a Carrboro resident approached staff with a proposal to form an invasive species removal volunteer program. The resident assisted staff with recruiting and organizing volunteers to remove invasive species on Town property. The resident also took the initiative to reach out to the local High School to recruit student volunteers.

Town staff will utilize lessons learned from this program to recruit volunteers to plant trees for both planting events involved with this project. Staff will contact the network of volunteers from previous projects and post volunteer announcements on the Town's website and social media. In addition, a Carrboro resident initially proposed the idea for a pollinator garden and restoration along the stream in Anderson Park. This resident has signed a Letter of Support to volunteer to plant trees and help recruit others to participate in this project. Staff will also request that members of the Town's Environmental Advisory Board and Stormwater Advisory Commission assist in spreading the message about the project to recruit volunteers. Staff will also work with the Town Council to issue a proclamation in support of the project. Carrboro residents are passionate about tree conservation and Town staff feel that participation in the tree planting and tree workshop will be substantial.

**6. How will this project leave a "Tree Legacy" for future generations?**

The trees will leave a Tree Legacy for future generations by improving water quality and stormwater management, sequestering carbon, and increasing pollinator and wildlife habitat in Carrboro. The project will also provide an educational outreach opportunity to inform Carrboro residents about the benefits of riparian buffers and urban forests. The trees will be planted in an established park with high levels of visitation, and will be located in an exposed, visible area on the banks of an intermittent stream between two ball fields. Numerous intramural teams utilize these fields to play sports through recreational leagues each year. Visitors to the park will be able to read informational signs and participate in citizen science opportunities to learn about the importance of trees to water quality, stormwater, wildlife, and pollinators.

The Town hopes to create a time lapse of tree growth in the riparian area by using an interactive format. Staff will install a wooden post with a metal bracket where visitors can place their phones to take a photograph of the area. Visitors will be able to upload the photo to a social media site and label the photo using a pre-determined tag. As photos are taken, staff will compile them to document growth of the area and share the video with residents.

Staff also plan to designate this area as a monitoring site for the National Phenology Network. The National Phenology Network provides a medium for citizen scientists to collect, organize, and share phenological data through a phone app called Nature's Notebook. The data will be used to track changes in the phenology of species in Carrboro over time and will also be available for scientists to analyze to aid others in natural resource management. Allowing citizens to have a medium through which to observe and track patterns in the park will facilitate a general understanding and appreciation of the natural world which Carrboro residents can impart to future generations.