

Nature Preserves Program ANNUAL REPORT 2019-2020



Connecting people to nature today to preserve nature for people tomorrow.

The Nature Preserves Program is part of the Natural Resources Section within the Cultural Resources Division of Parks, Recreation, and Cultural Resources.

Our **mission** is to connect people and nature through experiences, education, and conservation.

Our **vision** is to create strong, healthy, sustainable communities and environments.

Why we connect people and nature through education, conservation, and experiences:

Connecting people with nature builds stronger, healthier, and more environmentally sustainable communities. The development of meaningful connections to nature creates resilience, promotes social connection, strengthens family bonds, and empowers individuals through building self-confidence while fostering the development of problem-solving skills. Furthermore, spending time in nature has been proven to promote physical and emotional health and well-being.

Early and repeated exposure to the natural world through **education** and hands-on **experience** is one of the best means to foster a sense of stewardship. Increasing awareness and knowledge of the interconnectedness of the natural world and humanity's role in it, combined with meaningful experiences, can inspire change and informed decision making, ultimately moving individuals toward becoming better stewards of the earth.

Conservation of natural ecosystems and the preservation of green space offers a broad range of benefits, including improved water quality, flood control, improved soil health, and preservation of biodiversity. The preservation of forests, in particular, reduces local air pollution that impacts our community's health. Forest preservation is also one of the most effective and cost-efficient nature-based climate solutions to help curb the negative impacts of global climate change.



Our Impact

How we connect people to Nature:

We Manage and Protect



More than 600 acres

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Forests, lakes, rivers and

wetland habitats



Rare and endangered plants and animals

We Educate and Interpret



14,197 program attendees



679 programs



Serving families, children, adults, and seniors

We Provide Public Access



To 4 Nature Preserve Sites



To over 86,000 visitors annually



To 9 miles of hiking trails, and facilities including nature centers, classrooms, shelters, and rental venues



How Do We Do It?





753 Volunteers, 2,338 hours

Our Sites

Durant Nature Preserve

Durant's 237-acre preserve provides visitors with a mix of scenic habitats and experiences to explore. It showcases heavily forested stands of mixed hardwoods alongside planted pines, two lakes, a creek, and bird and butterfly gardens.

Visitors can enjoy a host of self-guided activities such as fishing, birding, nature photography, hiking, a sensory garden, and picnicking, or take part in one of many exciting nature education programs or special events. Durant offers something for everyone at every age, but most of all, it offers a respite from the hustle and bustle of a growing city, and a calm, peaceful place to unwind and soak in the soothing sights and sounds of nature.



"Wonderful park to spend the day! Trails winding through lush green forests almost feeling like hiking into a wonderland of prehistoric trees and brush. Great variety of trails and scenic views, and the rangers are always friendly and helpful."

–Park Patron

Walnut Creek Wetland Park

An urban wetland park, Walnut Creek Wetland Park and Norman and Betty Camp Education Center in 2009. Its nearly 50 acres of natural area is made up of bottomland hardwood forest, the confluence of Little Rock and Walnut Creeks, and the Walnut Creek Greenway. The Norman and Betty Camp Education Center is a silver LEED-certified facility where you can find a rainwater cistern, rain gardens, free electric vehicle charging stations, and a bicycle repair station. The Center features live animals, a nature-resource library, children's nature books, as well as education, activities, and crafts focused on a rotating theme. Explorer backpacks, scavenger hunt materials, rain boots, nets and binoculars are available to check out, free of charge.

"As an educator and a citizen, the wetland park opened my eyes to the value of our urban natural area—as this area develops, are we aware of this incredible resource that we all own? How are we engaging kids to be stewards of this resource?"

-Frank McKay, Educator & Member of Partners for Environmental Justice



Horseshoe Farm Nature Preserve

Situated on an oxbow, surrounded by the Neuse River on all three sides, sits Horseshoe Farm's expansive open meadow. The meadow's rich native food sources and cover provide boundless wildlife observation opportunities and offer inspiration for the numerous nature education and art programs offered year-round by staff and local artists.

Visitors to Horseshoe Farm can enjoy a hike on the meadow loop trail which provides unspoiled views of the meadow and a glimpse of life inside the woods, or along the newest trail which leads into the woods towards the Neuse River, taking visitors on a journey through a rich bottomland forest including native giant cane, ephemeral wetlands, a natural levee system and fields of wildflowers.



While the natural beauty of Horseshoe Farm takes center stage, the Preserve serves as a model of sustainability in our parks. Careful design and attention to sustainable features such as permeable pavers, solar lighting, native landscaping and the City's first and only composting restroom, led to Horseshoe Farm receiving the Sustainable SITES Initiative two-star rating.

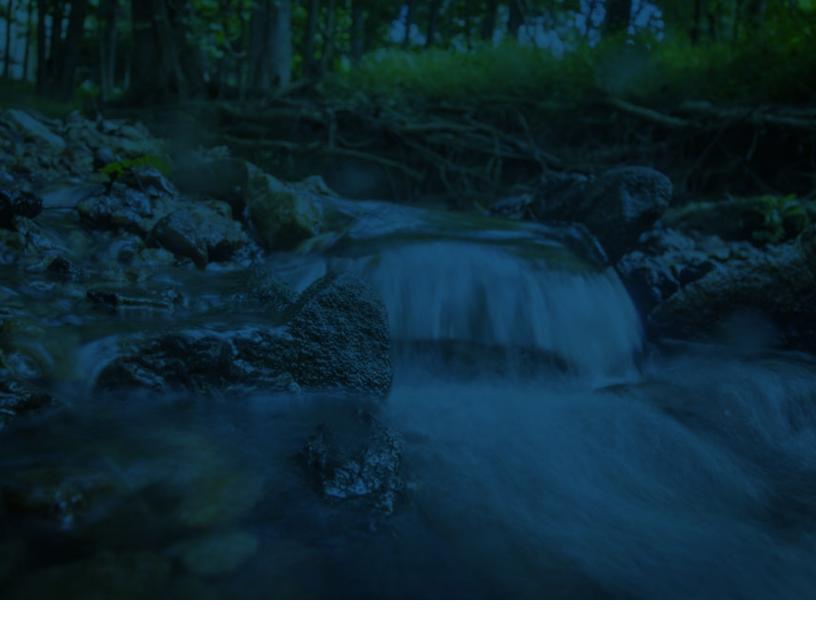
Annie Louise Wilkerson, MD Nature Preserve

Annie Louise Wilkerson, MD Nature Preserve is 157-acre park. The property was formerly a working farm with over 20 acres of pasture at its center, which are now managed as a wildflower-rich early successional habitat that complements the upland forest, rock outcrop, pond, stream, and small wetland habitats found in the rest of the preserve. The Preserve's diverse habitats are of great conservation value and are known to support 12 species of plants and animals listed by the North Carolina Natural Heritage Program. Over 2 miles of hiking trails allow visitors access to these habitats as well as the AWL Education Center. A covered picnic shelter adjacent to our nature playground provides enjoyment for visitors looking for a peaceful nature preserve park experience or for small group picnics.

"They loved all of it; it couldn't have gone better – a great mix of geology and plant biology. The conservation program that you have pursued there is a wonderful example of what a few motivated people can accomplish with the right approach and consistency."

—Herb Amyx, Neuse RiverHawks, NC Native Plant Society, and NC Wildlife Federation.





We Manage and Protect

Our sites contain examples of high-quality plant and animal populations, natural communities, and ecosystems, that contribute to biodiversity and environmental health. We manage and protect our natural areas using best management practices so that we can sustainably balance the protection and enhancement of the natural areas while providing access to explore them.



We manage and protect more than 600 acres of forest, lakes, rivers, and wetlands that provide home to many rare and endangered plants and animals.

Management

We use best management practices and strategies such as the use of prescribed burning, non-native invasive plant removal, and habitat restoration to enhance the biological diversity and increase the health of the habitats found on our sites.

Invasive Plant Removal

- Wilkerson staff and volunteers finished a long-planned effort to eliminate all invasive-exotic tree & shrub cover from Wilkerson's forests.
- Thanks to grant funding from The Conservation Fund, American Conservation Experience (ACE) was hired to remove 6-acres of invasive plants from Walnut Creek Wetland Park. Species such as Chinese privet (Ligustrum sinense) has taken over much of the wetlands, leaving it uninhabitable for our native plants.





Youth Conservation Corps

Over the summer, a team of eight youth and two crew leaders went to work on the parks around Raleigh, including Walnut Creek Wetland Park. They served WCWP by removing invasive plants and litter from the wetland. In addition, they were able to experience many different environmental and land management techniques, including tree climbing and banding songbirds. WCWP staff coordinated lessons on birds and bird banding from Murry Burgess, Lauren Pharr, and Deja Perkins, who spearheaded the inaugural Black Birders Week in May of 2020.



Major Storm Impacts Durant Nature Preserve

On February 6, 2020, Durant Nature Preserve was hit by a severe storm that toppled hundreds of trees, closed the park for a month, and rendered the park office uninhabitable. Thankfully, no one was injured during this storm. We are fortunate to have the assistance and support of our wonderful Parks Division who came out with heavy equipment and chainsaws to clear trails to get the park back open as soon as we possibly could, but there is much more clean-up to be done.



Research

We partner with local universities and organizations, work with volunteers, and mentor students in an effort to conduct research that helps us make the best management decisions for our preserves and the species who live there.

Box Turtle Connection Project

Durant and Horseshoe Farm staff applied for, and received, a grant to join the Box Turtle Connection Project to study populations of Eastern Box Turtles within the preserves.



Plant Population and Health Monitoring Continues at Wilkerson

In 2020, Wilkerson recorded measurements and health assessments of its 100+ GPSmapped Ash trees, continued a multi-year project tracking quantitative measurements of its native orchids' vegetative and reproductive productivity, and continued documenting additional species (native and exotic) as part of Wilkerson's on-going taxonomic inventory, now exceeding 700 vascular plant taxa.

After several years of fenced protection from deer and poachers, the small but recovering population of Pink Lady's Slipper Orchids at Wilkerson produced their highest numbers of flowers and total leaves yet recorded at Wilkerson in April of 2020 (110 total leaves, and 7 flowering plants total – seen above are some flowering plants with the colored flags used to mark plant and flower locations from previous years for population tracking)





Project Nest Watch and Feeder Watch Program

Wilkerson recorded 18 nesting attempts, producing 39+ fledglings.*

Durant recorded 1 Carolina Chickadee fledge, 14 Eastern Bluebirds, and 26 House Wrens.

Horseshoe Farm recorded 7 Eastern Bluebird fledglings and 10 Carolina Wrens.

Fledglings included 30 Eastern Bluebirds, 3 Carolina Chickadees, and 6 Brown-headed Nuthatches*

NOTE: Brown-headed Nuthatches are listed by the NCWRC in the latest NC Wildlife Action Plan as a "Species of Greatest Conservation Need."

Planning

We have initiated the development of land management plans for our preserves and nature parks to help allocate resources, to provide a strategy to manage and protect resources while providing access to them, and to establish systems to monitor and evaluate the health of resources and effectiveness of management practices over time.



We Educate and Interpret

We develop educational programming that is hands-on, engaging, and diverse to accommodate the needs of our community in order to help develop a city that is aware of and concerned about the local environment, and which has the knowledge, skills, attitudes, motivations, and commitment to work individually and collectively toward solutions for a more environmentally sustainable future.



We serve more than 30,000 people annually through our more than 2,500 programs that serve families, children, adults, seniors, as well as school children and teachers.



Nature Programs

The Nature Programs Area offers outreach through mobile programs delivered in schools as well as natural areas throughout the City of Raleigh. Nature Educators provide hands-on experiences for students that correlate to the North Carolina Standard Course of Study's grade-level science curricula and early-childhood standards for the preschool curricula. Programs integrate literacy, math, and/or social studies elements when possible, based on the grade-level standards.

"We are all in this difficult situation together. I can't thank you enough for showing up for these kiddos. Learning about nature is always important, but I feel that that importance is amplified during this time in which children are spending so much of their day in front of a computer."

—Amy Sanchez, J.W. York Elementary, Title 1 Preschool

Site-Based Programming

Each of our sites supports a wide range of educational programs and events that bring participants of all ages into deeper connection with, and understanding of, our natural world.

Connecting During COVID-19

In effort to connect and engage with the community during COVID-19, The Nature Preserves and Programs Team, in collaboration with Outdoor Recreation, initiated The Nature Connection – a newsletter providing status and site updates, topical stories, and outdoor activity ideas for families to engage and connect to nature in their backyards, community, or parks.



Program Highlights and Events At Home with Nature

As schools closed and group programs were cancelled in the spring of 2020 due to the pandemic, the Nature Programs team sought ways to serve students and their teachers in new ways. In an effort to enrich students' virtual learning experiences, *At Home with Nature* resources were developed that included recorded videos and activity ideas focusing on a variety of nature themes. These resources targeted grade-level science standards while also incorporating math and literacy connections.

Thank you! I build my lesson plan for the week around your activities!!!!! I also include the videos in our virtual circle time meetings with students!

-Luba Tyer, Bugg Elementary, Title 1 Preschool

Carolina Madtom Sculpture at Walnut Creek Wetland Park

WCWP partnered with City of Raleigh Arts and City of Raleigh Stormwater to raise awareness of the importance of clean water and to highlight two new Green Stormwater Infrastructure (GSI) projects. Artists Jaclyn Bowie, Nyssa Collins, and Anna Wagner collected trash from in and around the wetlands which was then used build a catfish sculpture complete with a "swimming" tail! They also worked with the Youth Conservation Corps to create an art piece featuring a turtle and a great blue heron from trash the youth had collected.





People in Portraits

Walnut Creek Wetland Park hosted People in Portraits. Funded by the National Guild for Community Arts Education in partnership with Lifetime Arts, with support from the Office of Raleigh Arts and Pullen Arts Center, this program engages older adults in exploring themselves and their stories through portraiture.



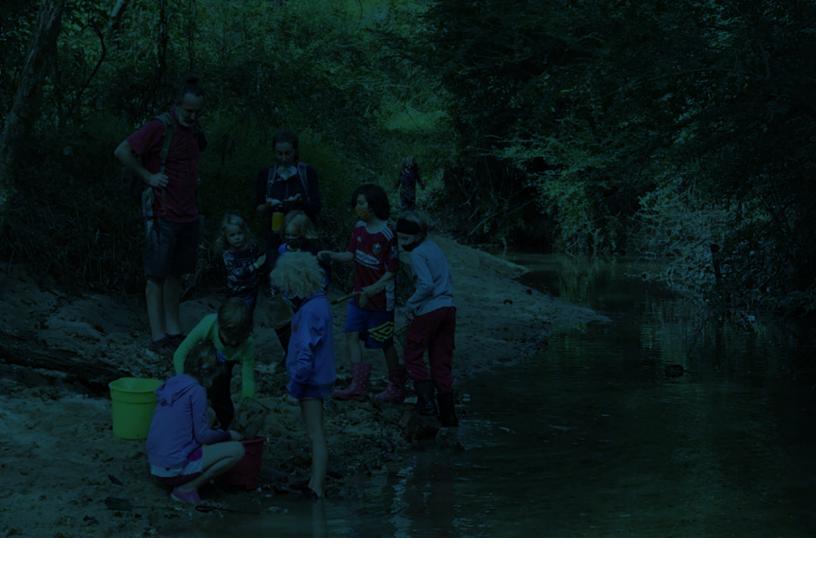
Enchanted Forest

Durant Nature Preserve welcomed over 70 guests to the "Enchanted Forest," an unforgettable luminary-lit stroll through the woods with stops to visit costumed animals that brought their woodland homes to life.



Pollinator Protection

Durant Nature Preserve taught participants how to become citizen scientists while surveying monarch caterpillars in their butterfly garden through **"Magical Monarch"** programs. The milkweed planted in the preserve has certified Durant as a Monarch waystation – a pit-stop for Monarchs along their migration to Mexico. The team also created a **"Wonderful World of Pollinators"** activity guide & seed balls which made it into the hands of over 200 families at food pick-up locations to provide fun nature activities families could do during quarantine. This guide was also distributed to Wake County Public Schools and made available online through the "Play Anywhere" site.



We Provide Access and Enjoyment

We provide diverse opportunities for the community to experience and connect with nature by offering: recreational opportunities; space for family and community gatherings, life events and business meetings with a natural backdrop; or quiet spaces for contemplation and nature appreciation to meet the needs and comfort of ALL.



We provide access and enjoyment to more than 86,000 visitors annually on our 4 sites which include nearly 9 miles of trail, educational nature centers, indoor classroom and lab space, as well as rentable shelters, event venues, and meeting space. Additionally, we provide access to other green space throughout the city through public and school-based programming.

Diverse Leaders in the Outdoors

A kiosk celebrating "Diverse Leaders in the Outdoors" was installed at Durant Nature Preserve, highlighting Black birders for Black Birders Week.

Durant Nature Preserve Accessible Play Space

Durant received a grant from the Kaleidoscope Foundation to complete a conceptual design for a future accessible, nature play space. The design was completed in partnership with NC State's College of Design's Natural Learning Initiative, input from the general public, and team members from the City of Raleigh Parks, Recreation and Cultural Resource including Parks and Specialized Recreation and Inclusion divisions.

Eco-Explore Hot Spots

Durant, Horseshoe Farm, Annie Louise Wilkerson, and Walnut Creek were all designated as eco-EXPLORE hotspots through an initiative developed by the NC Arboretum to incentivize children in grades K-8 to become citizen scientists, fostering learning and exploration outdoors.



Partners for Environmental Justice Fund Nature Playscape Design

Partners for Environmental Justice generously agreed to fund the conceptual and schematic design for a nature playscape for Walnut Creek Wetland Park, an element of the Master Plan. This plan is expected to be complete in early 2021.

"North Carolina Weekend" Comes to Wilkerson



In June, Wilkerson staff worked with UNCTV to film highlights of Wilkerson for an episode of the PBS program "North Carolina Weekend" – which aired statewide and on the PBS website.

Thank You

Volunteers, collaboration and strategic partnerships are fundamental to who we are, what we do, and how we do it. We would like to take a moment and THANK our 2019-20 partners and volunteers - without whom, we would not be able achieve our goals.

2020 Partnerships

Abbotts Creek Elementary School Activate Good American Conservation Experience (ACE) **Boy Scouts** Carnage Middle School Carolina Wetlands Association Center for Human-Earth Restoration and Neighborhood Ecology Corps City of Oaks Foundation City of Raleigh Arts City of Raleigh Stormwater eMammal Candid Critters Environmental Educators of North Carolina **Exploris Elementary and Middle Schools Fuller Elementary** Girl Scouts NC Museum of Natural Sciences NC Office of Environmental Education NC State NC State Parks NC Water Resources Research Institute NC Wildlife Resources Commission NCSU Global Village NestWatch North Carolina State University Partners for Environmental Justice **Raleigh Rescue Mission** Service Raleigh The Conservation Fund Wake Audubon Wake County Parks Wake County Soil and Water Conservation Wake County Title 1 Preschools Wake Nature





Our Volunteers

Our volunteers help us in a variety of ways: They help maintain our trails; remove non-native invasive plant species; create habitat; build, maintain, and monitor our bird houses; prepare program materials; and so much more!





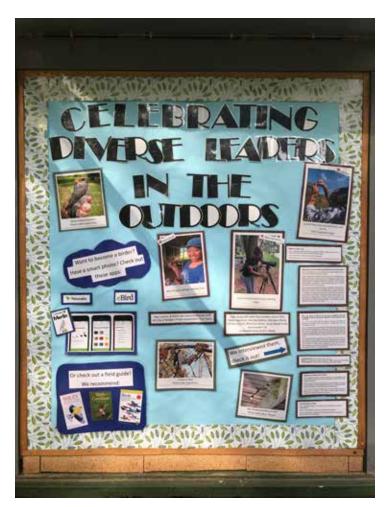
North Carolina State University Work-Study Students

In Fall 2019 through Spring 2020, Wilkerson hosted the first NCSU work-study student known to have received simultaneous academic credit for their COR work-study experience.

How Do I Get Involved?

Click the link above or contact:

Mary Owens Resource Development Manager City of Raleigh Parks, Recreation and Cultural Resources Phone: 919-996-3292 Mary.Owens@raleighnc.gov

















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