



Enhanced: The Guyton Trail Garden



Submitted by Effingham Georgia Green to the City of Guyton, Georgia
August 2023

Acknowledgements

Effingham Georgia Green (EGG) thanks the City of Guyton for inviting input to enhance the Guyton Trail. EGG appreciates the assistance, suggestions, comments, and ideas of Mayor Russ Deen, Councilman Marshall Reiser, and Guyton resident Mike Gerwig. Their enthusiasm for the trail and understanding of its current and future potential as an amazing resource for residents, visitors, the environment, and the local economy is exciting and makes additional enhancements possible. EGG looks forward to assisting the City of Guyton as it desires with trail enhancements. The Guyton Trail already serves so many and will continue to be an attraction for new users and an example for other municipalities in Effingham County, Georgia, and beyond.

This document was prepared and written by Rita Elliott and Margaret “Maggie” Kelly of Effingham Georgia Green (EGG), with research from Daniel Elliott, August 2023. *The mission of Effingham Georgia Green is to create, educate, and advocate for a greener Effingham County, Georgia, where nature thrives along with people. It is a consortium of policy makers, small business owners, environmentalists, and educators.* EGG has a cadre of volunteers to undertake specific projects benefiting the Effingham County environment.



Introduction

Guyton, Georgia enjoys a downtown trail with huge potential to be a linear park featuring lush and varied pocket gardens throughout that all citizens and visitors can enjoy. In addition an enhanced Guyton Trail can provide exemplary ecosystems to help replace extensive habitat loss. “Green infrastructure is a win for the environment, a win for our communities, a win for the climate, and a win for the bees, butterflies and other pollinators suffering because of human-caused habitat loss” (Environment America 2023). This preliminary outline, assessment, and recommendations are provided by Effingham Georgia Green (EGG) at the request of Mayor Russ Deen. The pro-bono project was undertaken in the Fall of 2022 and completed in the Summer of 2023. This window of time enabled a better understanding of the trail from meetings with the mayor, city council members, citizens, as well as from site visits and interaction with events on the trail. This document is not intended to be a comprehensive landscape design, but rather an outline of concepts and recommendations for consideration.

Overview

The current one-mile trail in downtown Guyton runs generally north-south and parallels Central Boulevard (Georgia Highway 17) between Third Street and just beyond Simmons Street (Figure 1). The trail consists of a six-foot-wide smooth asphalt path that occasionally bifurcates into two paths in close proximity before merging back into a single path. The trail’s footprint lies along the abandoned Central of Georgia Railroad Road. It connects to the Pilgrim Park Trail, owned by the Pilgrim Missionary Baptist Association. A donated caboose sits at the southern end of the Guyton Trail. Just north of that is a flagpole and benches. Other metal benches and trash cans on concrete pads are located alongside the trail at various intervals. It is likely that slightly buried gravel from the railroad bed lies in the open areas. Grass blankets most of the area, except in shadier sections where live oak trees, other canopy trees, and some crape myrtles cluster. In general, the moderate sized live oaks are aligned intermittently along the trail. There are no bushes or flowers along the trail (Figure 2). A tree survey recently commissioned by the City of Guyton has identified those live oaks with health issues so that measures can be taken to make them healthier, or if this is not an option, to replace them if not.

Around 2003 the City of Guyton began the project to turn the rail line into a pedestrian trail (Donahue 2009). In 2004 the City of Guyton was chosen by the Federal Highway Administration to receive a \$600,000 grant from its Transportation Enhancement program, to be matched by \$150,000 by the city (Curl 2008). Paperwork and other bureaucratic approvals required by the grantor delayed the project. By 2008, however, the Guyton City Council and the Georgia Department of Transportation entered an agreement to start the walking trail project (Curl 2008). The agreement enabled the Federal funds for this Rails to Trails Community Project to become available. Funding was to include underground drainage, landscaping with trees and shrubs, and structural items such as benches, lighting and picnic tables. The project deadline was December 31, 2009 according to the contract.

In 2009 the Guyton City Council examined four bids and approved a bid submitted by the firm Sikes Brothers for \$528,188 for construction of the Rails to Trails project (Donahue 2009). This was to be an asphalt path connecting to the Pilgrim Park concrete trail. It would also pass adjacent to the new post office, which city council encouraged to be constructed at the front of the lot near the trail rather than at the back of the lot with the parking lot fronting the trail (Donahue 2009). According to alderman at that time, the funding for the trail was slated to end in late 2010.

Current Trail Usage

Guyton public officials report that the trail is used by a variety of individuals. This includes local residents and non-locals walking for exercise and fresh air as well as pedestrian commuters and parents walking their children to school. Trail users range in age from infants in strollers to senior citizens; from children to dog walkers to bicyclists. No counts of trail users have been undertaken and anecdotal reports suggest that there is likely a minimum of 200 people a week using it (Personal communication, Mike Gerwig, August 11, 2023). This does not include the special events held along the trails. The City of Guyton sponsors a popular “Sale Along the Trail” every spring, summer, fall, and winter when vendors set up booths to sell items and food. Other events include “Trick or Trail” at Halloween and an event during the Christmas season that includes such things as a parade and a Christmas tree-lighting by the caboose. The city has also experimented with other events on the trail including races and a Health Walk, and had its first Earth Day Festival in April 2023 (Figure 3).

Entities bordering the trail include the Guyton Post Office, the Guyton Elementary School, and Pilgrim Church Missionary Baptist Association. On the other side of Central Boulevard, near the trail, is the Highland Park playground and basketball court and farther south near the trail sits the rehabilitated and relocated Guyton Train Depot. Immediately adjacent to the trail and along the Central Boulevard side of the trail there are numerous businesses and residences.

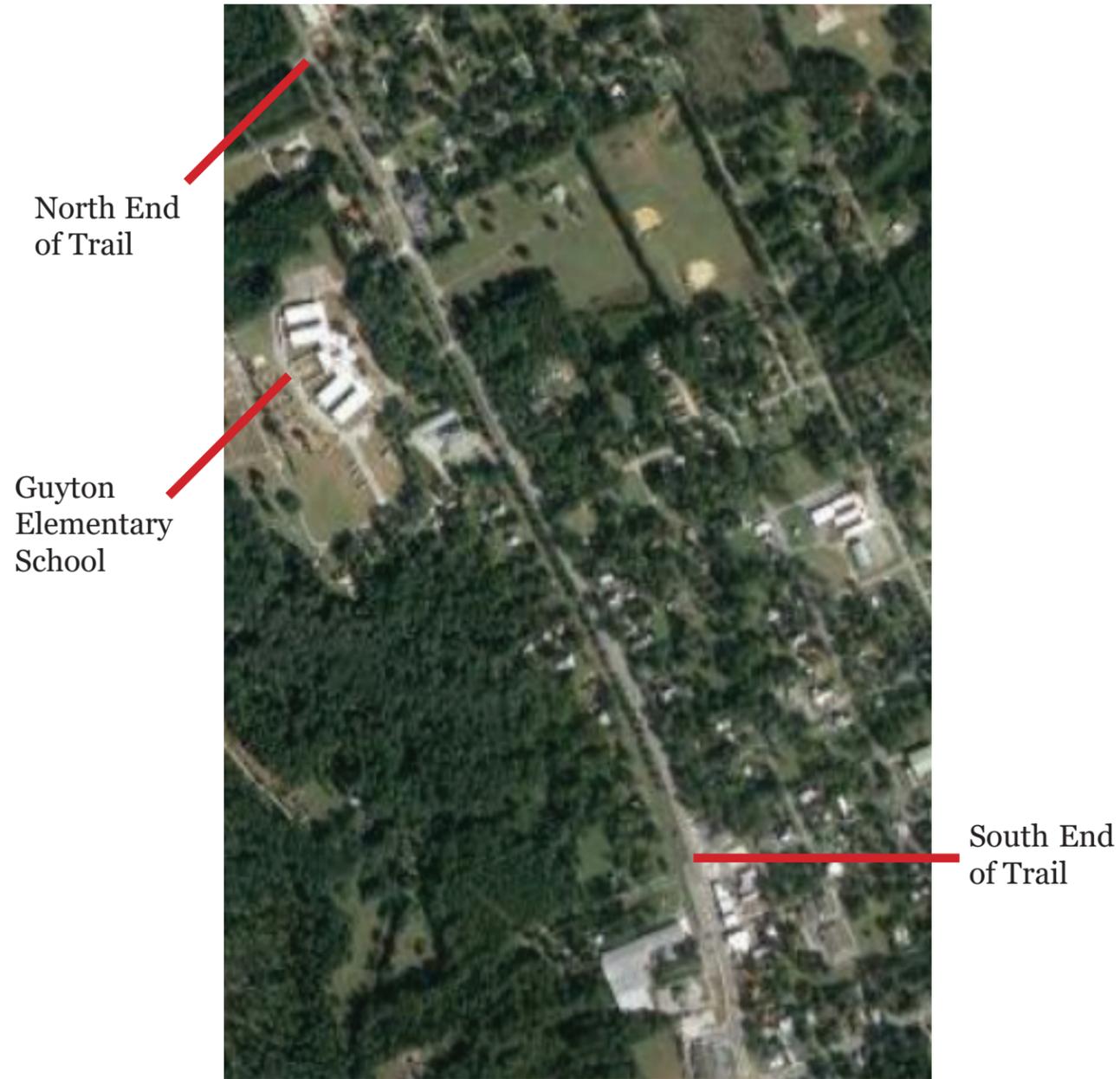


Figure 1. Aerial view of the Guyton Trail.



Figure 2. View of a portion of trail with live oaks, crepe myrtles, and grass.



Figure 3. First Earth Day Festival 2023 in tandem with Spring Sale Along the Trail.

Environment

The natural and cultural environment plays a role in the trail design. The topography, soil, rainfall, and other climate-related items are important to the plants selected. Also, the cultural history is useful to set a context for the trail and its interpretation. This is a very brief overview of the natural and cultural history of the trail area in order to place it in a broader context.

Natural and Cultural

The Effingham County Soil Survey ties climate data to that recorded at Ridgeland, South Carolina as of the year 2000. It is likely that in the 23 years since the recordings have become more volatile. In the year 2000, the average winter temperature was 50.5 F, with a daily average of 39.1 F. The average summer temperature was 79.6 F, with a daily average maximum of 90 F. Records lows and highs were 2 F and 107 F, respectively. Precipitation averaged approximately 51 inches annually, with approximately 40 inches during the growing season of March through November. Average relative humidity was 54 percent in the afternoon and 86 percent at dawn. Sunny days occurred 62 percent of the time possible in both summer and winter. Prevailing winds from the south averaged 8.8 miles at its highest in February and March (USDA 2007:4). The average first frost for Guyton ranges from Nov. 21-30 and the average last frost occurs from March 21-31 (Plantmaps 2023).

Soils along the trail consist of areas of the following soil classifications: LeA, FuA, and PeA. The LeA (Leefield) soils occur on flats on marine terraces and are somewhat poorly drained. Their soil profile consists of: 1-10 inches of very dark grayish brown loamy sand; overlying 10-24 inches of light yellowish brown loamy sand with mottling; overlying 24-29 inches of light yellowish brown loamy sand with mottling; above subsoil (USDA 2007:24-25). FuA (Fuquay) soils occur are well drained and occur on broad interstream divides on marine terraces. They have the following soil profile: 0-9 inches of very dark grayish brown loamy sand; overlying 9-28 inches of yellowish brown loamy sand; overlying subsoil USDA 2007:22-23). The PeA (Pelham) soils form in drainage ways and depressions and therefore are poorly drained. Their soil profile is: 0-6 inches of very dark gray loamy sand; overlying 6-18 inches of grayish brown loamy sand with mottling; overlying 18-33 inches of light brownish gray loamy sand and mottling; overlying subsoil (USDA 2007:28-29). Soils have been impacted by construction of the railroad track in the 1830s. It is likely that the trail footprint experienced grading and or infilling as well as the introduction of gravel, all changing the soil profiles to some degree.

The Guyton Trail lies within the Ogeechee River drainage. The river's name may originate with Native Americans calling themselves the "okesee" or "Kesee", who were noted along this river on Benjamin Martin's 1733 map of Georgia (Elliott 1992:4). Native Americans lived in or used the area that is now Effingham County from at least 8,000 B.C. during the Archaic period through 1540 and the end of the Mississippian period. Native American interactions during the colonial period were documented at New Ebenezer. Limited archaeological investigations have documented sites from the Archaic through Mississippian periods in the county, including some sites in the Ogeechee River watershed (Elliott 1992).

The area that would become Guyton was initially a 250 acre land grant to Squire Zachariah White in 1792. It was known locally as Whitesville. In 1837 or 1838 White granted the Central of Georgia Railroad a right-of-way through his property and the railroad named the stop Station Number 30. Upon White's death in 1838 Effingham County Commissioners seized the property for unpaid taxes. The county had the tract surveyed into lots and streets, then sold the lots at public auction. The station stop was renamed Guyton after a prominent area citizen named Archibald Guyton and to avoid name duplicity with another Whitesville station. Many wealthy Savannah residents used Guyton for their summer homes away from the low-lying swamps that caused disease (City of Guyton 2023). Later Guyton residents also included commuters working in Savannah who could take the train to town (Renfro 2005:191). African Americans were undoubtedly a part of Guyton from its birth and working and living in the area prior to that. By the mid-1850s schools and churches dotted the town. The Civil War saw a Confederate hospital constructed in Guyton and brought Union troops under General William T. Sherman directly through the town. Those troops intentionally destroyed the railroad track and depot (City of Guyton 2023). In 1869 freedmen and women constructed the New Hope A.M.E. Church in Guyton in what would become the Sugar Hill community (Brown 2023). In 1880 African Americans established the Pilgrim Missionary Baptist Normal and Industrial Institute for Colored Students. Guyton was incorporated in 1887 (City of Guyton 2023). By 1907 the African American community in Guyton had its own cemetery, deeded by three women in the Ferguson family (Effingham Herald 2022). The 20th century also saw increased technology and telephone lines and electric lights installed in the town. Train service was strong with 10 passenger trains daily in 1918 carrying students, railroad workers, and workers employed in Savannah (Renfro 2005:193, 196). The mid-twentieth century found Guyton passenger train service diminished to three trains in 1940 and only one later. A Central of Georgia train wrecked in downtown Guyton in 1953 resulting in multiple freight cars derailing but no casualties (Effingham Herald 2011). The last train ran on the Guyton track in 1967 (Renfro 2005:196). The 2020 U.S. Census recorded 2,289 residents in Guyton. These included 527 families and 665 households (City of Guyton 2023).

Other Associated Trails

Pilgrim Trail is located at the north end of, and perpendicular to, the Guyton Trail. It is owned by the Pilgrim Missionary Baptist Association. Pilgrim Trail is a concrete path that extends approximately 0.5 miles west of the Guyton Trail. A variety of hardwoods and pines make a shady environment for shrubs in this natural setting. Recently the Guyton Mayor, City Council members, and citizens established a Camilla Garden here. They planted over 100 camellias in groupings throughout the woods along this trail, including many colors and some uncommon varieties. Camellias are well suited to somewhat shady areas and acid soils where pine trees grow. Additional companion plants can add cohesiveness to the shrubs and woods, further linking the plants throughout the woods into a true woodland garden.

In addition to the Guyton Trail being important locally, it will be included in the almost 250 mile long Firefly/Hi Lo trails that will extend from Athens to Savannah, Georgia (Georgia Hi-Lo Trail) (Figure 4) The 39-mile Firefly Trail runs from Athens to Union Point, Georgia. There it will join the approximate 200 mile long Hi-Lo Trail that will go through Guyton to reach Savannah (Lastinger 2021). The trail will incorporate the downtown Guyton path. The Hi-Lo Trail will bisect Effingham and eight other counties in the state, making it "... the longest paved trail in the country" (Georgia Hi-Lo Trail). The Hi-Lo Trail will connect communities, provide opportunities for active lifestyles, provide outdoor education, and empower rural Georgia (Georgia Hi-Lo Trail). Guyton Mayor Russ Deen stated, "We believe the Hi-Lo Trail is a great way for our city to grow economically without growing on a huge scale" (Bauman 2021). A recent meeting sponsored by the City of Guyton and run by the Hi-Lo Trail organization revealed the scope of the project, design features, and potential trail locations. A large audience suggests strong support for connecting the Guyton Trail with the Hi-Lo Trail. Unlike industrial, commercial, or residential development, this connection will bring visitors and revenue into town in environmentally sustainable ways. The Guyton Trail currently serves as a "Test Model" for other communities with linear parks or Rails to Trails that are interested in the Hi-Lo Trail (Personal communication, Mayor Russ Deen, August 11, 2023).

Other Trail Connections

In addition to connecting the downtown area, its residential and commercial tracts, and the Guyton Elementary School, the Guyton Trail is adjacent to a city-owned playground and basketball court and a city-owned tract that will become a YMCA facility. The playground and court are located directly across Central Blvd. from the trail, near the trail's north end. Work on this large tract slated for the YMCA will include rehabilitating existing structures and preserving the extant trees on the grounds to the fullest extent possible. Gently curving driveways should be considered to preserve existing trees, which will also help reduce the speed of cars entering and exiting the grounds

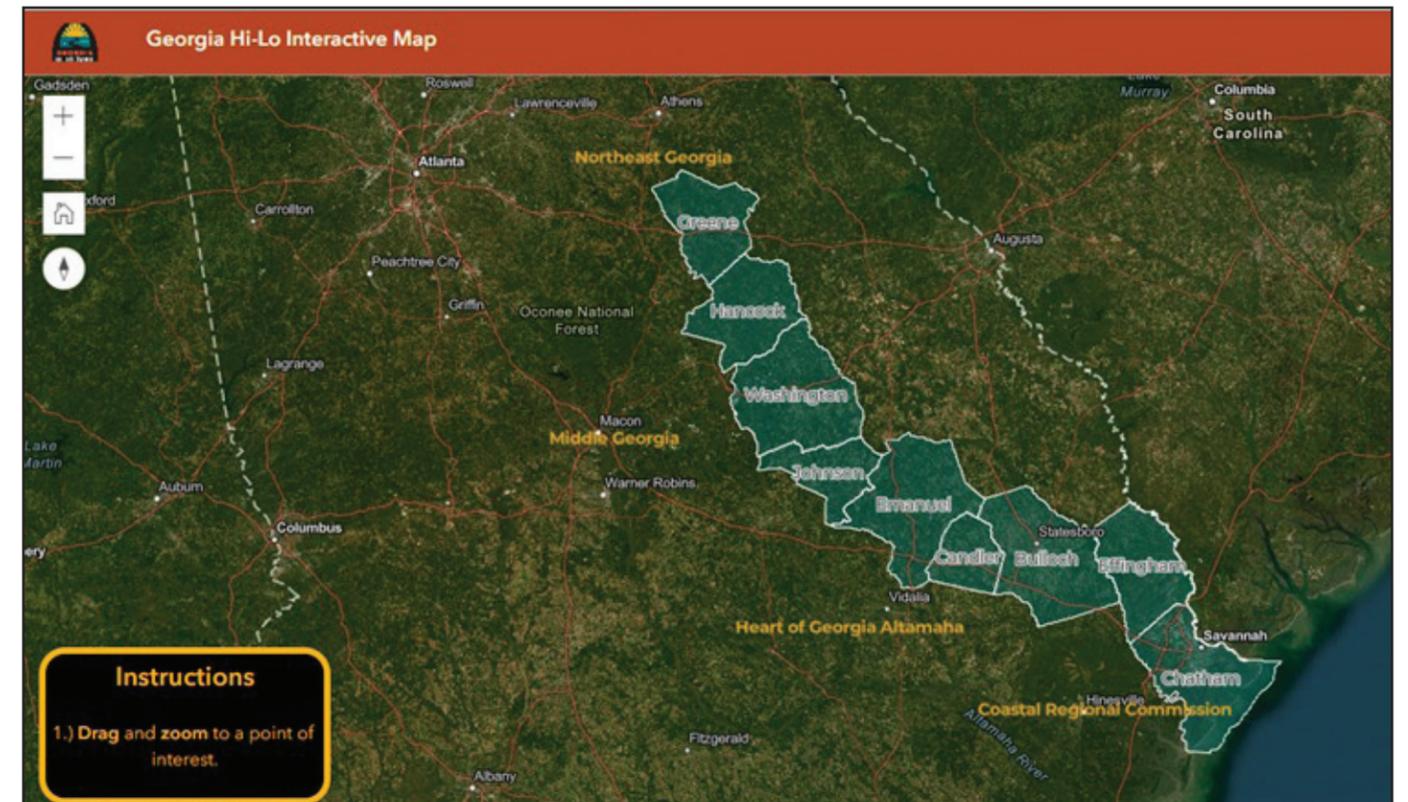


Figure 4. Map of Georgia counties where Hi-Lo Trail will be created (Georgia Hi-Lo Trail 2023).

where pedestrians will be walking or playing. This tract is located across Central Blvd. from the trail, but aligned somewhat near its midsection. Both the playground and YMCA offer natural connections to the Guyton Tail in terms of physical access between them and a relevant connection of physical activity desired by users.

Goals of an Enhanced Guyton Trail

The Guyton Trail is already a community focal point and county-wide treasure. Over the years the City of Guyton and its residents have worked to change the railroad bed to a recreation path to a smooth, asphalt walking and biking trail even as they currently work to save and care for the trees along the trail. An enhanced Guyton Trail fits well within this mind-set of improving a local resource for the benefit of the community.

The enriched trail will offer bountiful opportunities for relaxation, environmental education, exercise, and cultural enrichment. It will connect people to nature, to each other, and to relevant entities along and near the venue. An enhanced trail plan seeks to provide an environmentally friendly trail that will expand trail use by people, animals, and plants. It will have a variety of gardens and ecosystems to offer interest to the visitor and conservation for nature. In spite of additions and modifications to the trail landscape, large expanses of open space will remain so that programs that connect the community, such as the Sale Along the Trail, can continue to operate successfully.

Recommendations for an Enhanced Guyton Trail

This document examines potential concepts and designs that can contribute to an enhanced trail. This includes signage, art, trail heads, and pocket gardens. The Pollinator Garden is one pocket garden selected to be a demonstration garden for the trail. It is explored in greater detail below.

Signage

The Guyton Trail exists because of history, the footprint of the Central of Georgia Railroad track running from Savannah to Macon then Atlanta. In addition, the trail runs through a historical section of the town and is bordered on both sides by historical homes and structures. This close association with history begs attention in terms of interpretive signage for trail visitors. Two historical signs already exist along the trail. One is an interpretive sign about the Guyton Confederate Hospital. This sign exhibits serious wear, with numerous cracks across it (Figure 5). Another sign is a Georgia Historical Society Marker about the Pilgrim Missionary Baptist Normal and Industrial Institute, located near the church at the Pilgrim Trail Head. Given the history interlaced with the trail, it is a natural to create other interpretive signs that can provide an expanded cultural context for the visitor.

High pressure laminate (HPL) signs are made for the outdoors and can be designed with colorful, informative graphics and small amounts of engaging text for virtually any topic. HPL signs will not crack like enameled metal signs and will not degrade into a rough surface like fiberglass-embedded signage. HPL interpretive signs are perfect for exploring topics such as Guyton and the Railroad (placed at the

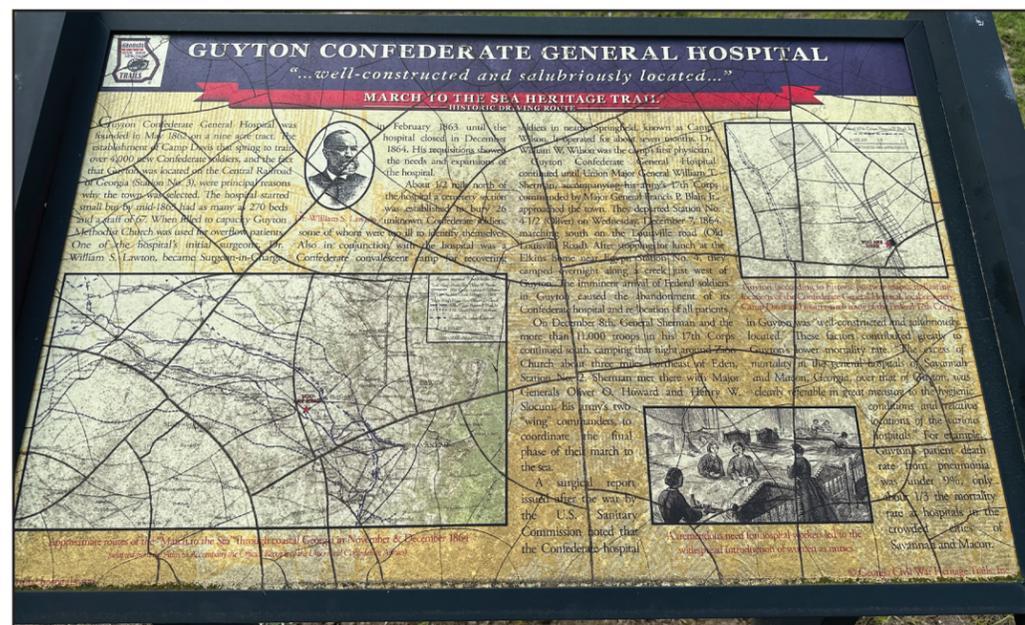


Figure 5. Damaged extant sign on trail, not a high pressure laminate (HPL).



Figure 6. Example of colorful interpretive sign.

Art

Opportunities for art abound along the garden trail. Some are mentioned below specific to certain gardens. Garden art can also grace segments of the trail that extend between gardens. Sculptures, nature themed art, and folk art are natural considerations for garden art. Additional consideration should be given to sculptures and other works that will complement the trail gardens. For example, art that plays upon specific garden themes, that embodies certain qualities such as humor or beauty, as well as art that harnesses wind, sunlight, or shadows to be complete, are all good considerations. Garden art can be added over time, as new opportunities and funding arises. Community art, especially that done by respected and/or cutting edge artists locally or within the region, can be a good source of art reflective of a cultural and natural area. Art considered for the trail garden must be safe, sturdy, easily maintained, and inoffensive.

Trail Heads and Name

Trail Heads are the official entries into the trail. It is important to mark and differentiate these locations so they are obvious and welcoming to visitors, and set the tenor for the entire trail. Trail Heads also can provide an introduction to what the user can expect. This can be done through interpretive signage as well as thematic clues in the hardscape, plants, and sculptural materials incorporated. The Guyton trail has two main Trail Heads on either end of the trail. This includes one at the southern end south of 4th Avenue near City where the caboose currently sits and one at the northern end near Simmons Street by the Pilgrim Missionary Baptist Association. The latter is near the related Trail Head for the Pilgrim Trail. A single sign with the name of the trail can be placed at the “main” trail head, most likely at the southern end of the trail. Such signage provides “prestige” to the trail and gives people a clear reference point about where the trail is and/or where to meet. A trail head sign can use natural design elements and colors to blend in with the surroundings, yet still mark the trail (Figure 7). The extant caboose only provides a meeting place reference.

The City of Guyton may wish to make the name of the trail official, such as “The



Figure 7. Examples of Trail Head signs with natural elements.

Guyton Trail”. This would create more awareness about the trail and its location, as it would be labeled officially on maps and easily referred to by name.

Gardens

The current environment of the Guyton trail linear park naturally provides multiple opportunities for distinctive gardens along its course. Given their relatively small size and scale, and the way they are “tucked in” to areas along the trail, they fit into the category of a “pocket garden”. Each garden recommended below takes advantage of current conditions to create individual garden types with distinctive plants, micro-environments, and refreshing visitor experiences. Regardless of their diversity however, the gardens are cohesive in their inter connectivity by the path itself as well as by repetition in key design elements such as certain plants, hardscapes, and plant identification and interpretive sign graphics. The following are recommended for the Guyton Trail: Pollinator, Children’s, Woodland, and Sensory gardens. These are detailed below.

Pollinator Garden (Demonstration Garden)

This garden is selected to be the demonstration garden for the various pocket gardens along the trail. The rationale for this selection is two-fold. Pollinator gardens are attractive to most people because they offer colorful flowers and butterflies. Pollinator gardens are an important way to help our natural environment as well as our human-dependency on it.

Location

Areas of the trail in full sun offer the perfect opportunity for pollinator gardens. A section of the trail immediately north of the Guyton Elementary School offers such a spot and is recommended for the Pollinator Garden (Figures 8 and 9). The location’s proximity to the school also provides the perfect opportunity for collaboration between the city, community, and K-5 students and teachers as well as toddlers in the new day care center on the elementary school campus. The garden can be an amazing interactive educational resource for the school as well as for the entire community, as outlined further below.

Components

Using native plants for 80% of the pollinator garden will ensure hardiness and low maintenance, while creating a natural ecosystem that will support a range of plants and animals. Beds of colorful native perennials and reseeding annuals provide pollen and nectar for bees, hummingbirds, bats, moths, flies, butterflies, and other pollinators. Rhizomes such as Jerusalem artichokes/sunchokes plants such as native milkweeds provide beautiful flowers for pollinators. Herbaceous plants like Georgia basil, dill, and parsley provide important food for caterpillars to spin cocoons and become butterflies. They also provide a pleasant sensory experience for human visitors to the garden. Shrubs and select understory trees can also contribute to pollinator food and shelter as well as garden aesthetics. Coral Bell honeysuckle and cardinal vine are native vines attractive to pollinators that work well on trellises. Other native plants providing food for pollinators include bee balm, black-eyed susans, purple coneflower, butterfly weed, liatris, goldenrod, common milkweed, native hibiscus, giant hyssop, and coreopsis. Additional herbs useful to pollinators for flowers, leaves, and seeds include cilantro, fennel sage, and thyme.

Planting beds will be designed to put smaller ground covers and “host or support plants” in the 24” adjacent to the trail and have bee-loving flowers and increasingly taller plants growing from 24” and further away from the trail. This will help bee activity focus away from the trail itself so that garden visitors and trail users with bee concerns will be more comfortable (Figure 10). The “host or support plants” are plants that benefit pollinators in ways not involving large flowers and can include plants used as shelter, eaten by caterpillars, or providing seeds. An interpretive sign in the garden will address bee concerns.

Plants purchased locally at native plant nurseries will provide the items most suitable to thrive in this area, support the local economy, and reduce the carbon footprint during garden creation. Two examples of native plant nurseries in the area are Black Creek Nursery and Thompson’s Native Plants. Colorful, relevantly-themed plant identification tags throughout the garden will make visitors want to learn about the plants surrounding them.

Educational

Interpretive signs with beautiful graphics and easy to read text will share interesting facts with visitors such as why pollinators are crucial to the food we eat, why chewed leaves can be a good sign (when they are the food for swallowtail, monarch, or other caterpillars), or why select dead garden plants are not removed in the fall (to allow pollinator eggs and other beneficial insects to overwinter and emerge in the spring). Figures 11 and 12 are two examples of such signs. Interpretive signage can include general “Scavenger Hunt” questions whose answers change with the seasons and require garden observation. The pollinator garden can educate visitors of all ages and allow them to understand and appreciate nature and the environment better and take action to help preserve both.



Figure 8. Proposed location of southern portion of Pollinator Garden (view to South). Note elementary school and sign in right background.



Figure 9. Proposed location of northern part of Pollinator Garden (view to North). Note city playground in right background, across Central Blvd.



Figure 10. Examples of flower beds with a grass border. A similar border between flowers and the trail using host plants rather than grass will attract bees away from the trail.

The pollinator garden adjacent to the Guyton Elementary School will be an excellent opportunity for substantial environmental education, STEM and STEAM learning, physical education, and art as well as English/Language Arts education. A large body of curricula for these subjects as they relate to the outdoors and pollinator gardens specifically already exists on the internet. In addition, teachers can use the garden to create their own curriculum or lesson plans should they desire. The garden also offers both teachers and students the opportunity to connect with nature by working with the Friends of the Garden to help plant seeds, dead-head flowers, and do other tasks that help the garden thrive.



Figure 11. Example of a pleasing, educational sign.

Structural Elements



Figure 12. Another sign example.

The area along the trail best suited to a pollinator garden is flat and grassy with few trees. Structural elements will provide additional visual interest for visitors and can benefit plants and pollinators. Some structural elements can be interactive for the visitor, such as a human sun dial and hobbit house, providing kinesthetic opportunities. Others provide interesting sights and sounds, including topiaries, whirligigs, sun art, and windchimes. Yet other structural elements can provide interactivity for humans and benefits for plants and animals, such as arbor tunnels, plant teepee trellises, and allies.

A topiary caterpillar arching above and across the trail would be an eye-catching and whimsical way to mark an entrance to the pollinator garden, while symbolizing the importance in the ecosystem of caterpillars and plants they require. Figures 13 and 14 are two examples. It would be especially relevant if the plant colors selected match the vivid yellow green and black of the swallowtail caterpillar (Figure 15). The topiary can be

designed to require little maintenance after construction.

The pollinator garden's location in full sun provides specific opportunities for visitor engagement. One is a human sun dial. This incorporates markers on the ground (such as flagstone flush-mounted with ground surface) laid out in such a way that a person's shadow falling on the inscribed markers acts as a bezel in a watch, telling the time. Sun art is another opportunity. A "stained glass", crystals,

and plant sun catcher "pole tree" (out of visitor reach) can throw unexpected color in ever-changing hues and patterns on one area of the garden.

A hobbit house will provide a visually interesting and fun addition to the garden for children and their families, as well as adults. Two general examples appear in Figure 16. The house would have a simple pass-through (constructed by a 4' diameter concrete pipe) so children could be seen on either side of it and in it. Colorful doors on either side of the opening would be mounted in permanently opened positions. The two facades surrounding either end of the pipe would be flat for the walls of the hobbit house, with details like a shuttered window and a windowbox. The sloping roof and other two sides of the structure would be created by a large mound of soil extending to the ground and topped with grass or ground cover. Native shrubs and tall plants around the edges would help provide the illusion of a hill into which the hobbit house is constructed.



Figure 13. A topiary caterpillar.

A large-scale whirligig mounted out-of-reach on a pole is another structure that will provide amusement to the visitor and movement to the garden on breezy days. This art can be custom made to fit the theme of the garden. Consideration should be given to local artists for a commissioned piece.

Wind can also power an auditory treat for visitors. A very large wind chime in one part of the garden, or a series of small to larger wind chimes there or throughout the garden can provide a soothing addition to the visitor experience. These can be purchased already made.

Hardscapes and Functional Features

The pollinator garden will encompass the extant walking trail, with elements on both sides as well as in the middle where the trail forks and then reunites. Any secondary paths extending off of the trail can consist of shredded wood mulch, fine crushed gravel, and/or tree slices flush with the ground and secured in place. All paths will be accessible, to include pedestrians, strollers, scooter chairs, and wheel chairs. Seating can include benches and natural seats such as large, flat, heavy tree stumps.

Garden beds will be a combination of in-ground and raised beds, complimented by a few large container pots. Compost and topsoil additives will be required as the trail is located on a former railroad bed. A water source for pollinators is necessary. It should be safe for children and low maintenance. Two recommendations that fit and are a visually pleasing and functional addition to the garden include a gurgling spring/fountain that has no associated pond and is solar powered. This makes a pleasant sound for visitors while attracting birds and pollinators, yet has no accumulated water and associated drowning risk. The solar powered pump is an effective alternative to the lack of electrical outlets at the garden that is also environmentally friendly. A birdbath refilled by rainwater supplies drinking and bathing water. Small rounded stones in the bottom of the bath allow butterflies and moths to drink.

Considerations

Safety and maintenance are two main factors in garden creation. Safety is always the first consideration. The design and maintenance of the garden should keep this at the forefront.



Figure 14. Another topiary caterpillar.



Figure 15. A topiary could mimic the swallowtail caterpillar.



Another major consideration is garden maintenance. It is necessary to design the garden to be extremely low maintenance. Native plants are a good contributor to this goal. The pollinator garden must be free of pesticides and herbicides. This also reduces the maintenance necessary and increases visitor safety, but is often a difficult requirement for landscapers, grounds keepers and the public to understand. The “NO pesticides or herbicides” policy must be explained and periodically reinforced to anyone associated with garden maintenance as well as those involved in general trail upkeep and maintenance. All aspects of design will examine the best ways to make the garden and its components vandalism and theft-resistant. While nothing is vandal or theft-proof, there are ways to decrease such incidents.

The pollinator garden should be designed by a professional landscape architect familiar with linear parks, trails, and natural gardens. This will ensure that it examines current and future logistical issues, is aesthetically pleasing, and meets the many goals outlined. Community involvement is critical however, from design input to funding, to maintenance and to use. A community that is involved on these levels is one that will take ownership of the garden, protect it, help it grow, and enjoy it.



Figure 16. Two Hobbit House examples.

The pollinator garden should be a beautiful garden of refreshment for visitors and ecological bounty for nature. It will be engaging to all five senses. The garden will provide overt and subliminal educational opportunities for formal (school children, nature workshops) and informal audiences (commuters, bikers, hikers, garden visitors). It will be an ever-changing venue inviting repeat visitation and learning for all ages and abilities. Strong community ownership and involvement among a wide demographic also helps protect the garden from vandalism.

Phases

While a large, complete pollinator garden would be the most exciting thing to see, a phased-level approach would likely be more feasible. This would allow the community to understand the project and become involved with it, and enable multiple sources of funding aimed at the specific goals of each phase. It is recommended that Phase 1 consist of creating the overall landscape design for the entire pollinator garden and obtaining funding for the first section of the garden to be planted (the northern end).

Phase 2 would occur immediately after the completion of the landscape design if funding is available, or once funds were obtained through grants or other sources. Phase 2 would include making and planting the garden beds extending from the extant bench north along the trail to the tree. This would be the demonstration portion of the pollinator garden so that the community could see it and provide feedback. It would also serve as a “beta” model for unforeseen issues or benefits. The interactive structural features of the garden would be limited in Phase 2.

Phase 3 would consist of obtaining additional funding (using Phase 2 as an example) and the completion of the northern portion and the creation of the southern part of the pollinator garden. This phase would also incorporate the majority of the interactive structural features outlined in the overall garden plan.

Challenges

Challenges for the Pollinator Garden are the cost of designing it, the materials used, the labor in its creation, and the regular maintenance involving repairs or replacement of structures/hardscapes and replacement when necessary of plant materials. A variety of potential funding sources can be considered to make the garden a reality. This can include municipal funds (local or pass-through), grants (government, corporate, non-profit), and in-kind donations of labor and/or materials. If some municipal funds are available, they could be leveraged with grants requiring matching funds. A large number of grants exist for gardens involving schools and pollinator gardens specifically. Some grants target schools like Guyton Elementary, where on average 60% of the students receive free/reduced lunch. Grant funding is also available for community gardens.

Maintenance challenges include watering, regular maintenance and sporadic repairs. The closest water spigot is located at the memorial at the north end of the trail by Pilgrim Church Trail. While it may be suitable for temporary use with multiple hoses or filling plastic barrels on golf carts, this is not the best long-term option. A line item in grants should be written to include extending a buried water line and surface spigots to the pollinator garden as well as a timed irrigation system. Extending the water line will be extremely useful to the garden and also provide water along the trail for other needs.

Regular maintenance includes watering after establishment of new plants and during drought periods, deadheading flowers, pulling errant weeds in mulch, and monitoring overall health of the garden and its components. Such maintenance cannot be done by overburdened city staff, nor should it. If done well, the garden will be the pride of the community from which individuals will establish and join a “Friends of the Garden” group. This volunteer group will have a strong core membership and develop parameters for garden maintenance and operation to ensure continuity and garden survival. The friends group can then incorporate additional volunteers to help them with specific activities. These volunteers can include students, teachers, community organizations, corporate employee volunteer days, and others.

Children’s Garden

This garden is best located in front of the Guyton Elementary School or immediately to the southwest. This location readily serves those students and teachers, yet is accessible to all children and families who don’t attend that school. The Children’s Garden is aimed at children and those young at heart and is laced with interactive, educational opportunities. While the Pollinator Garden has several child-friendly elements in it, the Children’s Garden is completely focused on active, engaged, kinesthetic learning for very young children, toddlers, young children, tweens, teens, and adventurous adults. Visitors enter a colorful, interactive world through asymmetrical arbors that lean opposite ways in “Dr. Seuss” fashion – a tall one for adults and a short one just for kids.

Raised beds throughout the garden include a variety of plants, with beds sorted by categories (Figure 17). The “rainbow bed” has plants whose foliage or flowers are one of the seven colors of the rainbow, and are arranged in an arc by color. The “touch me” bed invites gentle touching of textured plants such as lamb’s ear. The “smell me” bed has aromatic plants such as mint. These and other plant beds

are arranged in a little mini-maze, making a fun journey of discovery, with casts of animal tracks and animal fossils to touch and explore along the way. Small interpretive signs with flaps, shapes, and wheels posted throughout the Children's Garden use images and cartoons to teach about bugs, soil, plants, animals, and their ecosystems (Figure 18). A large, narrow rectangular raised bed has thick plastic sides (similar to the old "ant farm" kits but wider and much larger), allowing visitors to see the soil layers, plant roots as they grow, and bugs inside. A nearby label describes it and asks the visitor questions about what is happening. Giant bugs mounted throughout the garden provide whimsy along with teachable moments, as each holds a name tag with a one-line description written from the insect's viewpoint (Figures 19 and 20).



Figure 17. Raised beds don't have to be square!

Other sensory elements of the garden can include music. A gong or zylophone, securely embedded in concrete encourages visitors to make music. Colorful wind chimes provide natural music with the breeze. Other kinesthetic experiences can include a plant teepee, hopscotch, and a bridge. A large teepee made of durable material can be one focal point of this garden. It offers a changing landscape from purely structural in winter to green and shady with vines in the summer. Pole beans or similar annuals are one option. Permanent vines may be an option if they are not invasive. A hopscotch area uses embedded stepping stones as the game's squares, alternating with ground covers such as mosses or resilient herbs and is encircled by short, child-friendly plants. Nearby pebbles provide natural hopscotch markers. A large mobile floats in space high overhead with relevant nature shapes and designs. Small bridges lend themselves to interest and motor skill practice. Bridges can be assorted colors and architectural styles and lead from one garden space to another or can cross a "pond" made not of water but of blue and green flowers and plants and other "pond" accoutrements (Figures 21 and 22). Large tree stumps of various heights and securely mounted in the ground serve alternately as stepping and climbing opportunities, an obstacle course, and seats (Figure 23). These are just a few of the many fun and educational options available for a successful Children's Garden. More can be considered prior to garden design.

Woodland Gardens

These natural pocket gardens can be created in strategic areas along the trail that already contain groupings of multiple large trees. Layering plants is an effective way to create even a small woodland garden, providing food and habitat for a range of species. This



Figure 18. Signs can move!



Figure 19. Follow a trail of happy ants to a fun destination.



Figure 20. Large insects securely made and mounted, alight throughout the Children's Garden with fun facts.



Figure 21. A bright little footbridge to cross the Fern Sea.



Figure 22. A school of fish swim through fern seaweed.



Figure 23. Motor skills and exercise on nature's playground equipment.

also creates a cool and refreshing retreat for visitors and habitat for lizards, salamanders, skinks, toads, frogs, birds, and a host of other insects (Figures 24 and 25). Layering begins with the tall live oak canopy trees already along parts of the trail, to mid-canopy trees such as persimmons, to smaller understory trees such as native azaleas and redbuds, then to shorter shade-loving shrubs such as viburnum, oak leaf hydrangea, and yaupon holly, down to small plants like the geometrically shaped trilliums, then to cinnamon and maidenhair ferns, and finally to ground covers such as wild geranium (Figure 26).

Other native plants such as bloodroot, gallium, foam flower, rue anemone, wild ginger, and may apple provide greenery, and delicate yellow and white blossoms throughout the garden. These and other native woodland plants provide food and shelter for birds and wildlife. Natural components of this garden include items such a large hardwood log where lichens grow and beetles and other insects slowly turn the log into forest mulch. Plant textures and shapes can

contribute both subtle and striking textures in the woodland garden landscape. An interpretive sign with colorful graphics and fascinating facts explores the unique woodland habitat and its residents, examining everything from why the log is there, to resurrection fern, to how leaves make soil. A natural path of ground mulch winds through and around the Woodland Garden where natural features and focal points unexpectedly appear in view. A rustic seats provide a comfortable spot to watch the birds (Figure 27).

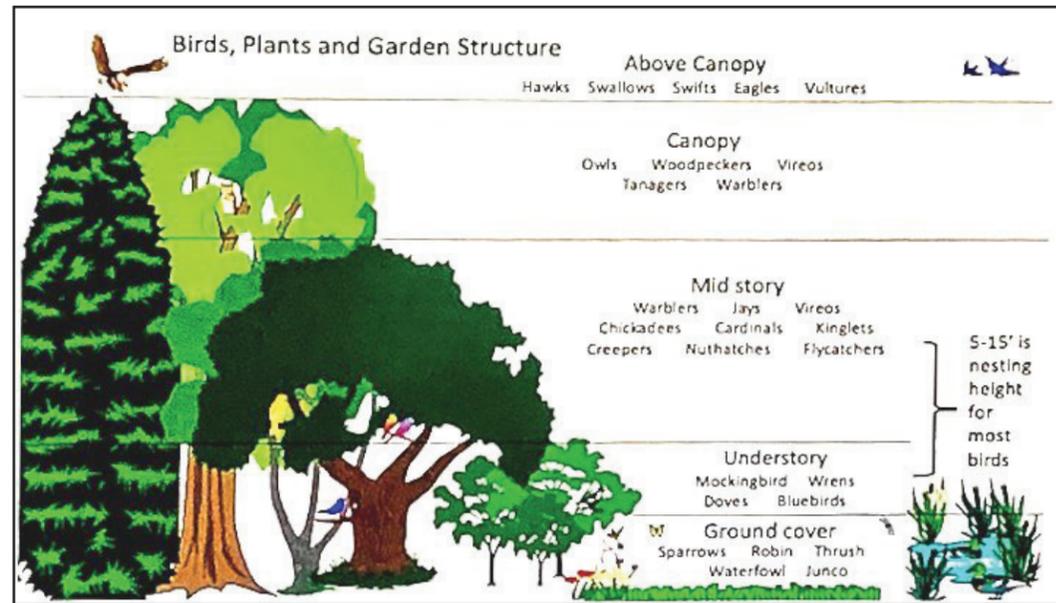


Figure 24. Woodland gardens thrive due to the various layers of trees, shrubs, and plants.



Figure 26. Trilliums thrive on the Woodland Garden floor.



Figure 27. Natural seats look at home in a Woodland Garden.

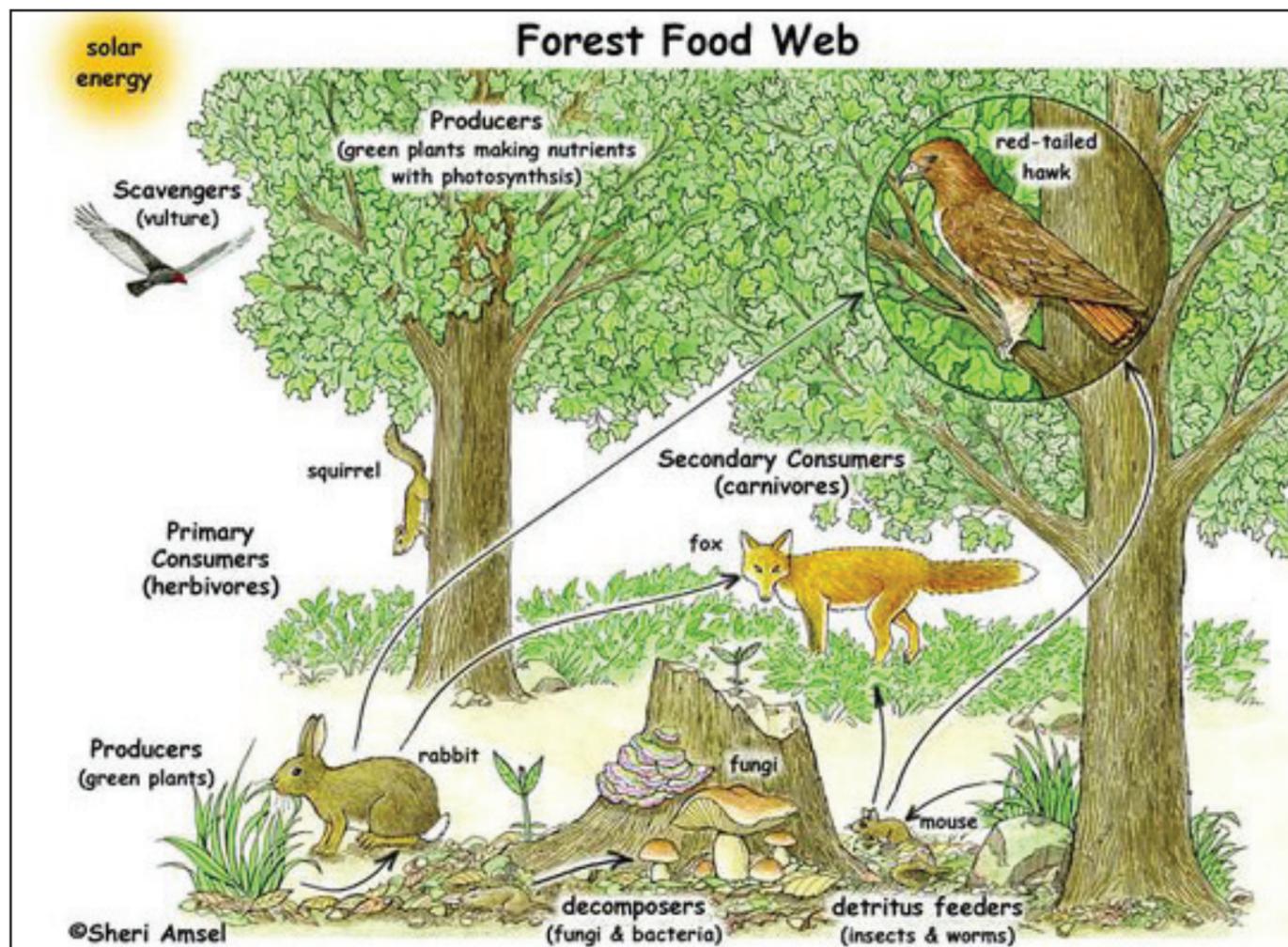


Figure 25. The woodland garden floor, teeming with insects, worms, and fungi, makes food for the ecosystem.

Sensory Garden

Another sunny area supports a sensory garden aimed at three of the visitors' five senses. Fragrant blossoms and herbs perfume the air. Rhizomes such as ginger lilies provide large clusters of papery white flowers offering a delicious fragrance. Visitors will breathe the aromatic, yet minuscule flowers of the evergreen tea olive understory tree. Winter daphne provides late winter aromas. Evergreen gardenia shrubs (dwarf or regular) offer fragrant blossoms in early summer. Perennial herbs such as rosemary, Georgia basil, and pineapple sage provide a range of scents beyond sweet ones. Efforts should be made to research and plant scented native plants such as the native fringe tree shrub with its frilly sweet smelling flowers. The Sensory Garden also offers tactile opportunities such as the soft spiky tendrils of the rosemary, and the fuzzy silver leaves of lambs-quarter, to name a few. Kinesthetic experiences occur when visitors touch the plants in a select area of the garden for this purpose. Interpretive signs delve into why plants have scents (both pleasant and unpleasant) and specific shapes and textures, and what insects are attracted to various plant scents.

Trail Recommendations

An enhanced Guyton Trail will require funding, planning, and effort, but will produce huge benefits to the community, economy, and environment. "The good news is that there's no shortage of money for green infrastructure – including projects that expand or improve habitat for pollinators. There is a wide range of funding sources and financing strategies available to fund pollinator-friendly green infrastructure in both cities and rural areas, with financial assistance available from the federal government, state and local governments, and private and nonprofit sources" (Environment America 2023). [See link to website in References Cited at the end of this document for potential greenspace funding sources.]

Trail Garden Design

The entire Guyton Trail should be designed by a professional Landscape Architect experienced in garden design, linear parks, and trails. This overarching design should also include the recommended pocket gardens as well as other functional and design elements that will benefit the trail, the environment, and visitors. Such a unified design will prevent a piece-meal approach that may not be cohesive and reduce unforeseen problems.

Plant Materials

Considerable thought should be given to the plants selected for the gardens. Good choices will enable easier maintenance, plant survivability, garden sustainability, and greater success. Native plants should be used as often as possible because they are hearty and contribute to a broader natural ecosystem. Plant materials should include an assortment of bulbs, rhizomes and other perennials that will return every year; evergreen as well as deciduous shrubs and trees; non-invasive vines; an assortment of groundcovers and taller plants; and various plants that ensure blooms, berries, or seed pods throughout the year. Such biodiversity will attract and sustain a broader number of insects, birds, and small animals while providing color and texture throughout the year to trail visitors. No invasive plants should be included.

Hardscapes

Hardscapes can provide visual and functional benefits to the trail garden. Some hardscapes have been mentioned above. Others warrant mention here. Raised beds require the importation of soil but may provide a better alternative to trying to plant in compacted railroad bed gravels. To eliminate the need to trim weeds around raised beds, a trim edge can be incorporated around the beds' bases. This edge can consist of flat stone, concrete pavers/stepping stones, or bricks dry-laid in the ground adjacent to each other and flush with the ground surface. The edge of a row of bricks or flat stones abuts a raised bed and the other edge ends at the grass, keeping the weeds out and enabling a lawn mower to cut the grass right up to the brick or stone border. The design and materials used in raised beds can be tailored to each garden. For example, formal raised beds in the natural Woodland Garden would look out of place. Medium to large "fallen log" tree trunks horizontally along the perimeter of the garden will hold soil in the bed while looking natural. Raised beds in the Children's Garden should be fun, colorful, aesthetically interesting, and thematically related.

Water and Irrigation System

Painting a house without sanding, cleaning, and priming the wood creates poor results. Designing and creating beautiful and environmentally sound gardens without proper preparation is asking for poor results. Gardens need water, particularly during their initial establishment and throughout times of drought or low rainfall. There is no city staff to water plantings along the trail and currently few water sources such as spigots. The Guyton Trail gardens will require the extension of the water line along the trail and irrigation system to survive and thrive. A successful system will be one that can be programmed automatically but can be moderated during rainy times when no irrigation is needed. While an irrigation system would be a large line-item in the budget, it would be a wise and necessary investment for the success of the trail gardens. Such infrastructure can be completed from grant funding and/or local in-kind labor.

Maintenance

The beauty and usefulness of a trail is critically dependent upon its maintenance. While it is highly recommended that garden trail design be as low-maintenance as possible, some maintenance will be required. Currently the trail is maintained through the work of incarcerated labor and includes mowing the grass and cutting weeds with "weed eaters/whackers". Design should consider the continued use of this type of maintenance for grassy and weedy areas. In addition, however, an elevated bit of attention can help the proposed gardens flourish while establishing strong community investment. An "Adopt a Garden" program can enable garden clubs, civic organizations, and other entities to take responsibility for an individual garden along the trail. Using the established "Trail Garden Guidelines" groups see that routine weeding, deadheading and other tasks are maintained. A small sign at each pocket garden names the adopting organization, ensuring that pride and social pressure from the public and from other adopting organizations encourages garden care. Public acknowledgment of all adopting organizations and a certificate awarded annually to the group with the most well-maintained garden would recognize good efforts.

Garden Guidelines

It is essential that Garden Guidelines be developed so that everyone is aware of a long-term garden plan. The guidelines should establish procedures for maintaining and protecting the garden. This includes a general maintenance plan as well as maintenance details for each pocket garden within the trail. It should include an annotated drawing or photograph of each garden along with a plant list detailing the needs of each plant type. The garden guidelines should also contain a list of plants to exclude from consideration along the trail, particularly invasive plants and plants treated with neonicotinoids. The Garden Guidelines should also outline how groups authorized by the City of Guyton can take care of the garden they choose to adopt along the trail.

Summary

This document provides an overview of the history and current state of the Guyton Trail. It offers recommendations for enhancing the trail's appeal to visitors and its benefits to the environment. It also examines challenges and benefits to enhancement, and ways to achieve successful and sustainable change. Effingham Georgia Green appreciates the genuine interest and valuable participation of Mayor Russ Deen, Guyton City Councilman Marshall Reiser, and active resident Mike Gerwig in making the Guyton Trail an even greater, more enjoyable, and more used community focal point.

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