

Macomber Park *GARDENS*



Macomber Park

GARDENS

Submitted by

Effingham Georgia Green (EGG)

April 26, 2024



Submitted to:

Rincon City Council, Rincon Georgia

Acknowledgements

Rincon City Councilwoman Ramona Underwood spoke with Effingham Georgia Green (EGG) representatives in February 2024 about environmental enhancements to Macomber Park. We applaud her interest in wanting to improve Rincon's parks, and hence, the environment and quality of life for residents and visitors.

EGG members live in Rincon and through the Effingham County, Georgia, and care deeply about the beauty and natural environment here and ways to improve both. The mission of Effingham Georgia Green is to create, educate, and advocate for a greener Effingham County, Georgia, where nature thrives along with people. EGG is a consortium of policy makers, small business owners, environmentalists, and educators. The organization has a cadre of volunteers to undertake specific projects benefiting the Effingham County environment. EGG is pleased to submit this pro-bono document to Councilwoman Underwood, the Rincon City Council, and Interim Mayor Kevin Exley, and to provide copies to City Manager Jonathan Lynn, and City Staff.



Chapter 1. Introduction

Purpose of This Document

The purpose of this document is to analyze existing conditions at Macomber Park and provide recommendations for environmental enhancements that are environmentally positive, aesthetically pleasing, and that result in long-term low maintenance. These recommendations will benefit park visitors by reducing flooded walkways, lowering ambient temperatures in the summer, reducing “heat island” effects, and decreasing visitor stress by adding areas of shade and beauty. The recommended garden areas will attract new visitors to the park such as walkers, joggers, and nature enthusiasts. These recommendations will transform the park from an environmental desert and contributor of pollution to a greenspace area in which native plants and birds thrive. It will filter polluted run-off draining from the fields and parking lots before the water enters Rincon Branch, then Dasher Creek and eventually into Abercorn Creek and the Savannah River. This filtration will also recharge the ground water. As importantly, the recommendations are made with consideration to reducing park maintenance. These concerted attempts have been made to address both current and future maintenance issues so that the recommendations can be adapted and embraced by everyone, especially those tasked with facility management and care.

Location and Background

Macomber Park is a public baseball field facility owned by the City of Rincon, Georgia and located at 1004 Lexington Avenue (Figure 1). It currently occupies approximately 31 acres. The recreational ball field was established approximately 50 years ago, and has been upgraded periodically (*Effingham Herald*, May 5, 2014). Refurbishments have included work funded by a \$15,000 grant in 2006, purchase of the adjacent Lions Club building [and application for wetland permits] in 2009-2010, and extensive expansion

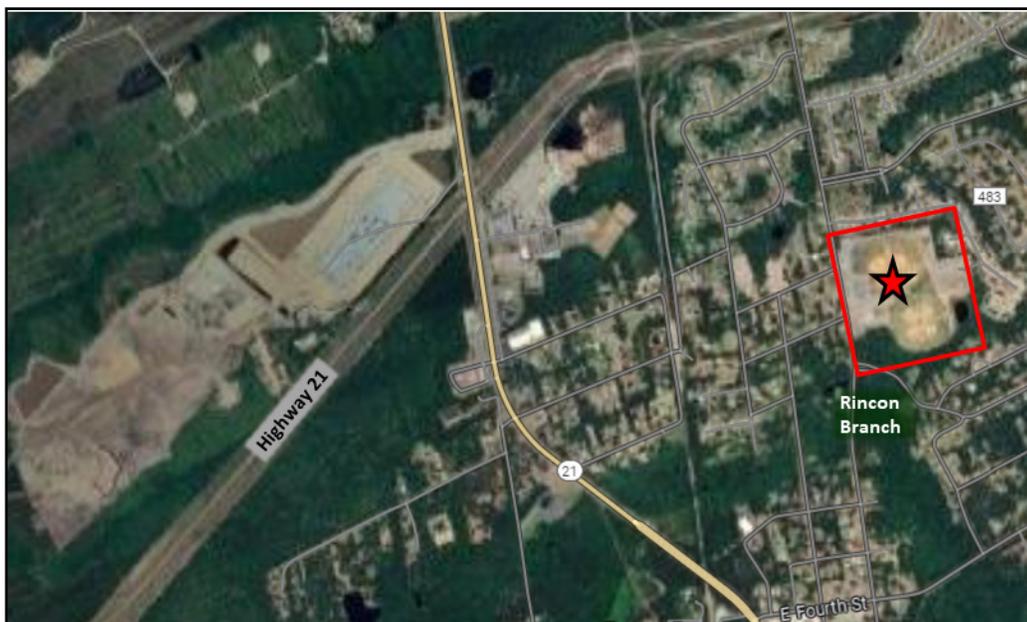


Figure 1. Red box and star show location of Macomber Park in Rincon, Georgia.

in 2014-2015 consisting of “...four new 220-foot baseball fields, batting cages, a new concession stand and additional parking areas” (Savannahnow September 13, 2006 and September 10, 2015). As of 2014, the park expansion and renovations cost approximately \$1.9 million and included upgrades to the existing facilities as well as a partial corporate grant that funded portions of a new concession stand (*Effingham Herald* May 5, 2014). Currently, Macomber Park contains eight baseball fields, batting cages, a 3,700 square foot rental building, restrooms, a concession stand, several parking lots, sidewalks, and a retention pond. Currently plans are being discussed in 2024 to undertake extensive redesign of the facility to address various existing design, functional, and operational challenges.

Chapter 2. Challenges and Opportunities

Methodology

EGG representatives preparing this document reconnoitered Macomber Park on February 10, 2024 during dry, clear, mild conditions and again on March 23, 2024, following a thunderstorm the previous night and that morning. These visits documented existing challenges to the facility as well as excellent untapped potential. EGG recommends focusing on the following four priority areas on the park property as detailed below:

1. Road Frontage and nearby Parking Lot Island;
2. Drain Field Swale between Event Building and Ball Field 5, and associated walkway;
3. Planting Islands in Ball Field Walkway; and the
4. Retention Pond.

Road Frontage and Parking Lot Island

The first thing a visitor sees when going to Macomber Park is the portion of the complex facing the street (Figure 2). This first impression is important as an opportunity to welcome visitors. It is also an important part of establishing an environmentally friendly context for the site.



Figure 2, View North of Lexington Avenue, grassy ditch, and Macomber parking lot.

Road Frontage

Lexington Avenue fronts Macomber Park's western border. Thoughtful plantings in this linear strip would make the park a more welcoming place, while anchoring it to its surroundings and providing resources for birds and pollinators. There are approximately nine feet between the edge of the road and the edge of a drainage ditch. There is another approximately 13 feet between the other edge of the ditch and the main Macomber parking lot. These strips of grass on either side of the ditch and the ditch itself total approximately 23-24 feet wide. This area would make a functional and appealing Road Frontage Garden. A line of trees planted along this linear strip would serve to highlight the park, but still allow a full view of the park from the vantage point of the road (for expressed safety concerns). Trees for this area should be deep rooted and not require frequent pruning or have much litter, nor be susceptible to wind damage or branch drop, and be tolerant of a wide range of soil and water conditions. Power and utility lines are located on poles across the street from the park (with the exception of one light pole near the middle entrance to the park having a single line running perpendicular and crossing the street), therefore will not be a problem for tree planting.

recommended tree types include Red Maple (*Acer rubrum*), Eastern Redbud (*Cercis canadensis*), and American Witchhazel (*Hamamelis virginiana*) and provide seasonal interest, color, and texture throughout the year and offer various benefits to wildlife.

In addition to a brilliant red fall show of leaves, red maples provide early spring beauty with showy clusters of small red flowers. Red maples grow in a range of dry to wet soils and full sun to part shade. They are drought tolerant and provide pollen for insects and small seeds for birds and small mammals. Red maples are the largest tree in this planting strip, with a mature height of 40-60' tall and 25-45' wide. Lower branches of the maples can start at 7' above the ground to avoid obstructing views.



Figure 4. Redbud tree in full bloom (Brown and Giovengo 2020).



Figure 5. Fragrant winter Witchhazel (Brown and Giovengo 2020).

Redbud trees reach a height of 15-30' and a spread of 20-25'. They have beautiful light purple flowers in the spring before their leaves sprout (Figure 4). Pollinators and birds benefit from redbud plantings. Redbuds will be interspersed with the maples and witchhazel trees.

American Witchhazel is a small tree with a mature height of 15-30' and a width of 15-25'. Its yellow fragrant blooms provide a fall/winter show (Figure 5). It has a long bloom time and provides benefits to pollinators, birds, and wildlife. Approximately the same size as redbuds, the witchhazel trees will intersperse nicely and both trees will complement the larger red maples

A clumping/creeping verbena, Rose Mock Vervain (*Glandularia canadensis*), is recommended as a ground cover for the grassy strip between the street and the parking lot (Figure 6). This ground cover will eliminate the need for mowing, keep the weeds from taking over, retain soil moisture for the trees, and be a pretty way to visually unify the entire 840' planting strip. This perennial evergreen ground cover will provide greenery in the winter and sports pink to purple blooms in spring through summer, and often through fall. It is hardy and fragrant and attractive to butterflies. It reaches a height of 10-12", so will be a noticeable ground cover that won't obstruct views.



Figure 6. Creeping Verbena (Gary Wade, University of Georgia, Bugwood.org).

Parking Lot Island

The Parking Lot Island drain field left of the main entrance and across from the rental building currently contains three small live oak trees and two unidentified deciduous tree (Figure 7). The deciduous trees may be in poor health. This island has a drain off-set from the center and the ground surface here slopes accordingly to drain the parking lot around it of storm water. The ground here is mostly in full sun because the live oaks are still too small to shade the entire island. The live oaks are an excellent tree for this area, specifically and for Macomber Park in general, as they offer such much-needed large tree canopy that will provide shade and



Figure 7. Current appearance of Parking Lot Island.

beauty while contributing to the human and natural environment. The Parking Lot Island area can be greatly enhanced with the addition of native shrubs and plants that will be visually interesting and will filter the petroleum, oil, and other pollutants in the storm water parking lot run-off much better than the current grass. This small parking lot island drain field can be thought of and planted as a rain garden, albeit smaller than the rain garden discussed further below for the area east of the rental building. Plant selections below for the Parking Lot Island offer year-round interest as well as

color and texture diversity.

A smaller repetition of some of the same plants recommended in the large rain garden are recommended here. The Parking Lot Island Garden can have stunning Virginia (Blue flag) Iris (*Iris virginica*) growing around and immediately up slope of the drain, and following the linear contour of the slight swale to the upper edge of the island. Several areas of Virginia Sweetspire (*Itea virginica*) shrub in clusters of three will provide winter greenery on the upper portions of the island (Figure 8), intersperse with the spring and summer-blooming bright yellow flowers of the perennial Black-eyed Susan (*Rudbeckia hirta*).



Figure 8. The fountain like branches of Sweetspire.

The “corner” areas of the island will contain focal points of goldenrod (*Solidago*) with bright yellow blooms in late summer-early fall, surrounded by purple flowering Stokes Asters (*Stokesia laevis*), which bloom in the spring and summer. Surrounding small clusters of Purple Lovegrass (*Eragrostis spectabilis*) will provide clouds of reddish purple airy flowers in late summer to mid-fall, with their 15” tall stems swaying in the breeze (Figure 9). The vivid red blooms of perennial Blood Sage (*Salvia coccinea*) will contribute bright accents in the garden while providing food for butterflies and hummingbirds (Figure 10). It blooms in summer and fall, and often year-round. Evergreen and semi-evergreen ground covers recommended for the areas between the plantings include the spring-blooming 3-6” tall whitish pink flowering Turnkey Tangle Frogfruit (*Phyla nodiflora*) and the 12” tall purple blooms of the Rose Mock



Figure 9. Purple Lovegrass.



Figure 10. Blood Sage.

Vervain (*Glandularia canadensis*). The latter provides a nice repetition with the ground cover along the nearby park planting strip on Lexington Road.

Drain Field Swale between Event Building and Ball Field 5, and Associated Walkway

The current drain field at this location consists of a swale bordered on the north and east by concrete walkways, on the south by mowed grass adjacent to the wooded Rincon Branch, on the southwest by a parking lot and on the northwest by a metal building rented for events (Figure 11). The swale has sparse grass cover and contains a grated drain offset from the center of the drain field. The only other vegetation within the swale is a row of small, stunted crape myrtle trees that parallel the eastern sidewalk (Figure 12 and Figure 13). Several of these trees have lichen growing on their branches, possibly symptomatic of stressed plants. Crape Myrtles, which are not natives, do best in well-drained soils.

Challenges

This location drains much of the surrounding area, yet it fails to capture all of the run-off from the adjacent ball field and from the ground south and southwest of that field. This leaves large flooded areas both on the ball fields and on the sidewalks as seen in Figure 14. The storm water run-off and its pollutants (herbicides, pesticides, fertilizers, oil and petroleum) from the ball fields and parking lots that run into the drain field flows into the swale's drain and directly into Rincon Branch, with virtually no plants to filter out the contaminants (Figure 15). In addition, the drain field swale is an eyesore that requires regular mowing and possibly other maintenance such as grass fertilization, watering, and herbicides. Vehicles likely associated with park maintenance appear to drive across two areas of this drain field, along the southern end and along the northwestern quadrant, resulting in compacted dirt paths and broken sidewalks as seen in the aerial view in Figure 11 (previously cited), and in Figures 16 and 17.

Opportunities

This drain field offers an excellent opportunity for the establishment of a Native Plant Rain Garden. "Rain gardens are specially designed and planted depressions in the ground that collect, filter, and treat storm water" and they "...more effectively capture and absorb rainwater than lawns..." (MOCZM 2022). Rain gardens slow storm water and filter it as it enters the ground. Rain gardens can be beautiful and integrated into the landscape, are a "simple, cost-effective tool...for municipalities" and when using native plants "provide pollinator and wildlife habitats" that "promote biodiversity and preserve plant species" (Brown and Giovengo 2020:6). Many cities already incorporate rain gardens, including Brunswick and Atlanta, Georgia, and Aiken, Bluffton, and Charleston, South Carolina to name just a few.

Rain gardens do not hold rain water longer than 18-24 hours, therefore do not breed mosquitoes. "Rain gardens encourage environmental stewardship and community pride" and when used throughout a community reduce "...the cost to maintain and upgrade traditional and gray storm water infrastructure" (Brown and Giovengo 2020:6). Once established, rain gardens need very little maintenance, no watering (except during droughts), no annual pruning, and no fertilizers or pesticides. In fact, synthesized fertilizers will kill native plants while encouraging weed growth.



Legend

- A. Crape myrtle island
- B. Metal events rental building
- C. Unightly equipment and HVAC caged-areas
- D. Drain field swale
- E. Stunted crape myrtle
- F. Vehicle-worn paths (outlined)
- G. River Birch
- H. Baseball field
- I. Edge of wooded Rincon Branch
- J. Parking lot



Figure 11. Aerial view of Drain Field Swale bounded by walkways on north and east.

Figures 12 and 13. Extant Crape Myrtles on site.



Figure 14. Flooded ball field behind fence and sidewalk at right where water does not reach the swale.



Figure 15. Water that does enter the swale flows to the drain near center of photograph.

A rain garden in the drainage swale at Macomber Park would filter the water currently draining into the swale, and could also filter a large portion of storm water currently pooling across Ball Field 5 and the sidewalks on either side of it, as well as the parking lot on the south side of the events building. If Macomber Park is redesigned/reconstructed in 2024 or later, design should include funneling as much water from these areas into the swale that can be accommodated by a rain garden here. Such rainwater can be diverted through pipes running

under the sidewalks into the swale, especially along the sidewalk east of the swale and at the southern end of the walk. Any such pipes added to the area should be incorporated into the rain garden design in



Figure 16. The tire tracks show where vehicles drive across the sidewalk between the parking lot and back door of the rental building.



Figure 17. Cracked sidewalk concrete from vehicle traffic.

garden.

order to ensure that the amount of run-off corresponds with the size the rain garden can accommodate, and that water coming from the pipe outlets have sufficient materials (plants and/or rocks) to buffer water entry and not cause erosion to the

Ideal rain garden soils are comprised of 50-60% sand, 20-30% topsoil, and 20-30% tripled-shredded bark mulch—blended together as much as possible. EGG recommends using ground cover in lieu of most areas requiring traditional mulch. Ground covers such as ferns, flowering forbs (broadleaf, non-woody, flowering herbs), rushes and grasses can be a thick living mulch that captures water, reduces weeds, and benefits the ecosystem. Tripled-shredded bark mulch can be used in small areas until the ground cover becomes established. The Macomber rain garden will include an assortment of small trees, shrubs, grasses herbs, and flowers in varying colors and heights that are advantageous to butterflies and other beneficial insects, songbirds, and wildlife.

Rain gardens are designed to have native plants established at specific elevations of the garden, depending on their hydric needs. Zone 1 plants at the lowest elevation around the drain can tolerate periodic inundation. Zone 2, around Zone 1 but at a slightly higher elevation, will support plants that can tolerate occasional water and moist soils. Zone 3, around and at a higher elevation than Zone 2, includes plants that prefer drier conditions. Figure 18 illustrates an example of the planting elevations in a rain garden. EGG recommends the creation of a rain garden in the drainage swale that will not only drain and filter the storm water from the surrounding portions of the park, but will be a beautiful vista for visitors using this half of the recreation complex (ballfields, parking lot, and events building) as well as those walking on the sidewalks around the park perimeter. Figure 19 shows the Rain Garden design in plan (bird's eye view). Figures 20-21 depict recommended Rain Garden plants. Figures 22-23 is a reminder of the swale's current appearance without a garden.

Hardscapes will be minimal and pervious, allowing rain water to filter through. The main hardscapes will consist of two paths created for maintenance vehicles. (See Figure 19.) It is recommended that medium sized river-gravels be used for these paths. Other options include either pervious or permeable pavers (where water is filtered within the pavers), or porous pavers (where water is filtered between the pavers). All of these enable water to enter the ground below. One semi-circular path will extend across the back of the event building, from the parking lot on the south side of the building to the parking lot on the northeastern side. This will enable maintenance vehicles to access the large back doors of the building for loading/

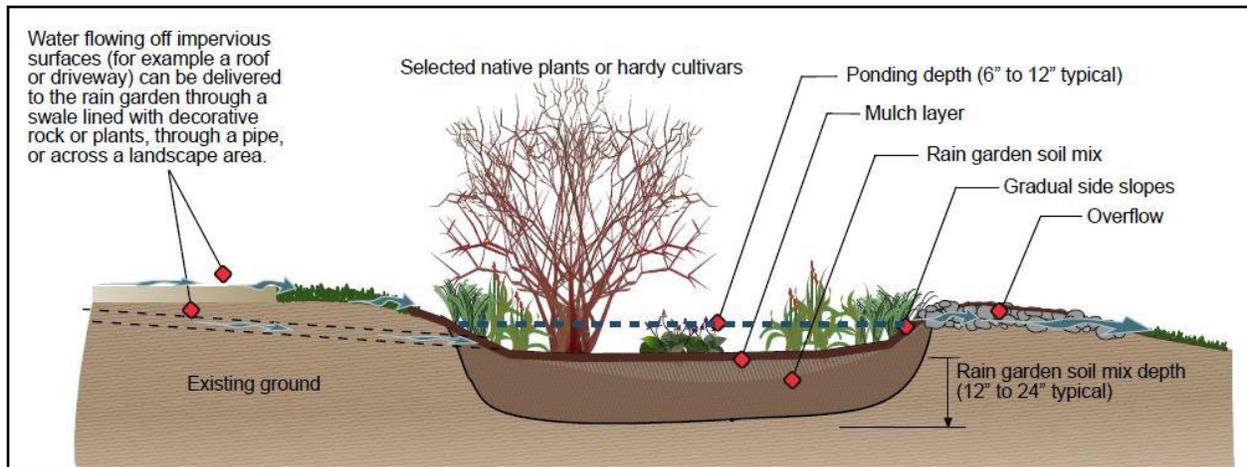


Figure 18. Cross section or profile of a typical rain garden (Snohomis Conservation District).

unloading purposes. This will cross the sidewalk on the north and required a shallow driveway curb in the parking lot. This path will keep vehicles from running over plants. It will also eliminate the current situation where they run over various parts of the sidewalk and crack it, yet still provide easy access to the building from either parking lot. The other gravel driveway will cross the southern end of the garden and run from the parking lot (south of the event building) to the side walk south of Ball Field 5. Like the previous path mentioned above, this path has been identified as an area already being used by maintenance vehicles that appear to traverse the southern sidewalk, which is also cracked. Demarcating these two paths on the edges of the rain garden will help ensure that maintenance vehicles do not drive randomly throughout the garden. Using larger river gravels will ensure that the paths allow rain water to permeate without washing the gravel into the drain. A vertical edging may assist in keeping gravels in place.

The only other hardscapes in the rain garden will be benches located along the garden side of the two sidewalks flanking the garden. (See previous Figure 19.) These benches will be located either on and parallel to the existing sidewalk or on small areas of pervious/permeable/porous pavers. The benches will not have backs, so visitors can choose to sit facing the sidewalk if they are waiting to meet people, or facing the rain garden for a scenic view.

The rain garden should have one to two signs colorful, interpretive signs facing one or both of the flanking sidewalks. These signs should have vibrant graphics with well-developed, brief text that illustrate why the Macomber rain garden is important; what it is doing for people, animals, and plants; and what interesting things visitors can look for during different seasons. These should be custom high pressure laminate full color signs mounted on frames. Two examples of such signs include the Adairsville, Georgia Hayes Park & downtown Aiken, South Carolina rain garden (Figure 24). The colorful signs will help people understand and appreciate the changing appearance of the garden and critical components of it.

One or two appropriate items of garden art may be incorporated into the rain garden. Art should be environmentally friendly, safe for people and animals, at an appropriate scale, able to withstand the elements, and contribute to, rather than take away, from the garden aesthetics.

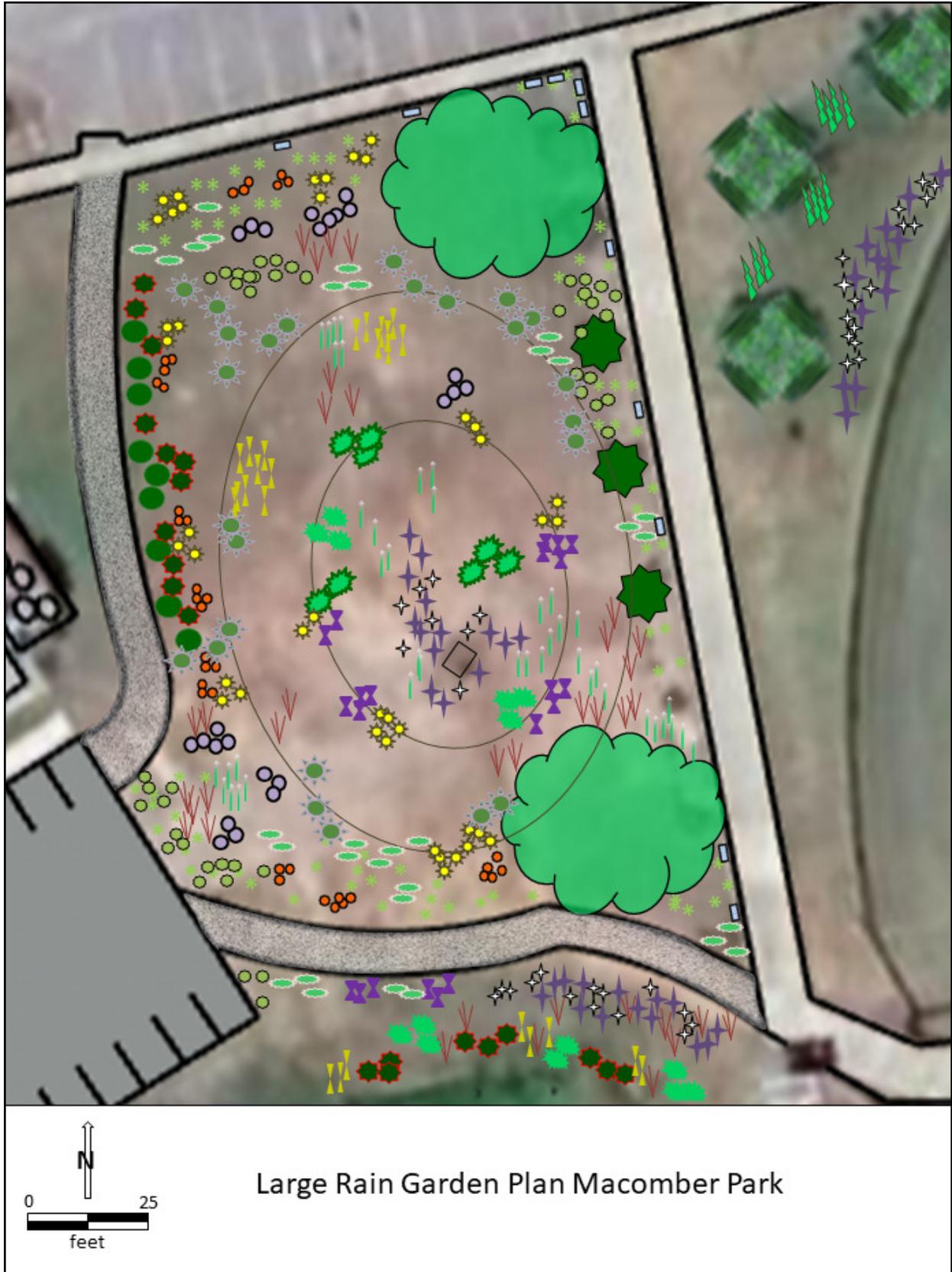


Figure 19. Plan of Rain Garden, formerly drain field swale.

Large Rain Garden Plan

Legend

	Blue Flag Iris (<i>Iris versicolor</i>)		Bench
	Rain Lily (<i>Zephyranthes atamasca</i>)		Black Gum (<i>Nyssa sylvatica</i>)
	Black Eyed Susan (<i>Rudbeckia hirta</i>)		Appalachian Mountain Mint (<i>Pycnanthemum flexuosum</i>)
	Butterfly Milkweed (<i>Asclepias tuberosa</i>)		Tall Ironweed (<i>Vernonia angustifolia</i>)
	Red Chokeberry (<i>Aronia arbutifolia</i>)		Cinnamon Fern (<i>Osmundastrum cinnamomeum</i>)
	Stokes Aster (<i>Stokesia laevis</i>)		Virginia Sweetspire (<i>Itea virginica</i> L.)
	Turkey Frog Tanglefruit (<i>Phyla nodiflora</i>)		Eastern Baccharis (<i>Baccharis halimifolia</i>)
	Goldenrod (<i>Solidago rugosa</i>)		Viburnum (<i>Nudum possumhaw</i>)
	Dense Blazing Star (<i>Liatris spicata</i>)		Wild Olive (<i>Osmanthus Americanus</i>)
	Bee Balm (<i>Monarda punctata</i>)		
	Georgia Savory (<i>Clinopodium carolinianum</i>)		
	Muhly Grass (<i>Muhlenbergia capillaris</i>)		

Legend for Figure 19. Christmas ferns (*Polystichum acrostichoides*) are another hardy native not shown above but versatile throughout a rain garden and are recommended to be interspersed.

Plant List for Large Rain Garden							
Image	Common Name <i>Scientific Name</i>	D or E	Mature Size		Bloom Color	Bloom Time	Plant Characteristics
			Height	Width			
	Hairawn Muhly <i>(Muhlenbergia capillaris)</i>	Se-E	2-4'	3-4'	Pink/ Purple	Summer, Fall	d-m, tolerates a variety of soil types and moisture conditions; periodic flooding, moderate-high drought tolerant, but best in moist soils, showy airy flowers, pollinators, birds, wildlife
	Cinnamon Fern <i>Osmunda cinnamomea</i>	D	2-4'	2-4'	N/A	N/A	m-w, groundcover, adaptable to wide variety of soil and light conditions, prefers dappled sunlight, does well under average garden conditions, may grow dormant with dry soils, cinnamon colored fibers
	Butterfly Milkweed <i>Asclepias tuberosa</i>	D	1-3'	1-3'	Orange	Spring, Summer	m-d, performs well in poor, dry soils, drought tolerant, does not tolerate flooding or saturated soils, showy flowers and fruit pods, deep taproot makes transplanting difficult, pollinators
	Virginia Iris <i>Iris virginica</i>	E	1-3'	1-3'	Blue, Purple, Yellow, or White	Spring	w-m, best in very wet soils in full sun, should not be allowed to dry out in growing season, tolerates having roots under water for protracted periods of time, part shade preferred, lovely delicate flower, spreads slowly by rhizomes
	Blazing Star <i>Liatris spicata dense</i>	D	2-5'	0.5-1.5'	Purple Pink	Summer, Fall	w-m, remarkably adapted, easy to grow, prefers full sun and moist soil; tolerates part sun and poor soils, better adapted to moist or wet, brief inundation, drought tolerant, showy spikes that bloom from top downward, clumping, pollinators, hummingbirds, songbirds
	Turkey Tangle Troglfruit <i>Phyla nodiflora</i>	E	1-6'	1-6'	White Purple	Spring, Summer, Fall	w-d, low growing groundcover, tolerates drought and flooding, heat tolerant, showy flowers, spreads vigorously, can be used as turf substitute in low traffic areas, pollinators
	Appalachian Mountainmint <i>Pycnanthemum flexuosum</i>	D	2-3'	3-4'	White	Summer, Fall	w-d, easy to grow, adaptable, tolerant of wet but also drought, showy dense button-like flower clusters, profuse bloomer, aromatic foliage and flowers, clumping, non-aggressive, colonize slowly by underground runners, pollinators
	Stoke's Aster <i>Stokesia laevis</i>	E	1-2'	1-1.5'	Blue, Lavender	Spring, Summer	w-m, drought tolerant for short periods, prefers full sun, showy flowers, dark green leaves, self seeds, purchase local ecotype, pollinators
	tall ironweed <i>Vernonia angustifolia</i> <i>(Vernonanthura nudiflora)</i>	D	2-4'	2-4'	Magenta Purple	Summer	m-d, drought tolerant, tolerant to wet soil, easy to grow in full sun, showy flowers, spreads by seed, pollinators
	Red Chokeberry <i>Aronia (Photinia) arbutifolia</i>	D	6-12'	3-6'	White Pink	Spring	w-d, tolerates wet or dry, low-moderate flooding tolerance, multistemmed, spreads by suckers, red/burgundy edible berries for birds and mammals, pollinators

Figure 20. Recommended plants for Large Rain Garden (Continued next page).

Plant List for Large Rain Garden							
Image	Common Name <i>Scientific Name</i>	D or E	Mature Size		Bloom Color	Bloom Time	Plant Characteristics
			Height	Width			
	Eastern Baccharis <i>Baccharis halimifolia</i>	E	5-15'	5-7'	White Cream	Fall, Winter	w-d, dioecious, often multitrunked, drought tolerant, heat tolerant, withstands frequent standing water, white flowers in fall/winter become showy silver-white seedheads, fragrant, pollinators, birds, wildlife
	Virginia Sweetspire <i>Itea virginica</i>	D	3-8'	3-6'	White	Spring, Summer	w-d, prefers dappled sunlight, tolerates flooding to 6 inches, frequent standing water, occasionally wet, drought tolerant, fragrant tiny flowers, spreads by suckers, pollinators, birds
	Wild Olive/Devilwood <i>Osmanthus americanus (Carteria americana)</i>	E	15-20'	10-20'	White	Spring	m-d, occasionally dry, drought tolerant, tolerates infrequent flooding, multitrunked, dioecious, fragrant, blue fruit, pollinators, birds, wildlife
	Rain Lily <i>(Zephyranthes atamasca)</i>	D	8-15"	4"	White to Pink	Jan.-June	m-w, tolerates seasonal flooding, white conical flowers w/red centers
	Black Eyed Susan <i>(Rudbeckia hirta)</i>	D	3'	1-2'	Yellow	March- July	m-d, drought tolerant. Cheerful blooms, pollinators, insects, birds
	Goldenrod <i>(Solidago rugosa)</i>	D	2-6'	3-5'	Yellow	Fall	wet to well drained, compact and cascading spikes of yellow blooms, pollinators, birds
	Bee Balm (<i>Monarda punctata</i>)	D	1-2'	1'	Lavender yellow	April-Sep.	d, drought tolerant, pollinators
	Georgia Savory <i>(Clinopodium carolinianum)</i>	E	12-18"	24-36"	Pink	Summer	d, well-drained, scented leaves and pink blooms, evergreen, pollinators
	Black Gum (<i>Nyssa sylvatica</i>)	D	30-50'	20-30'	Green, white	May-June	m-w, shade tree, bright red leaves in fall, mammals, birds, pollinators
	Viburnum <i>(Nudum possumhaw)</i>	D	10-12'	10'	Yellow- white	late Spring	medium, well drained. White flower clusters. Purple fruit. Red to purple leaves in fall, small mammals, birds, pollinators

Figure 21. Recommended plants for Large Rain Garden (Continued).

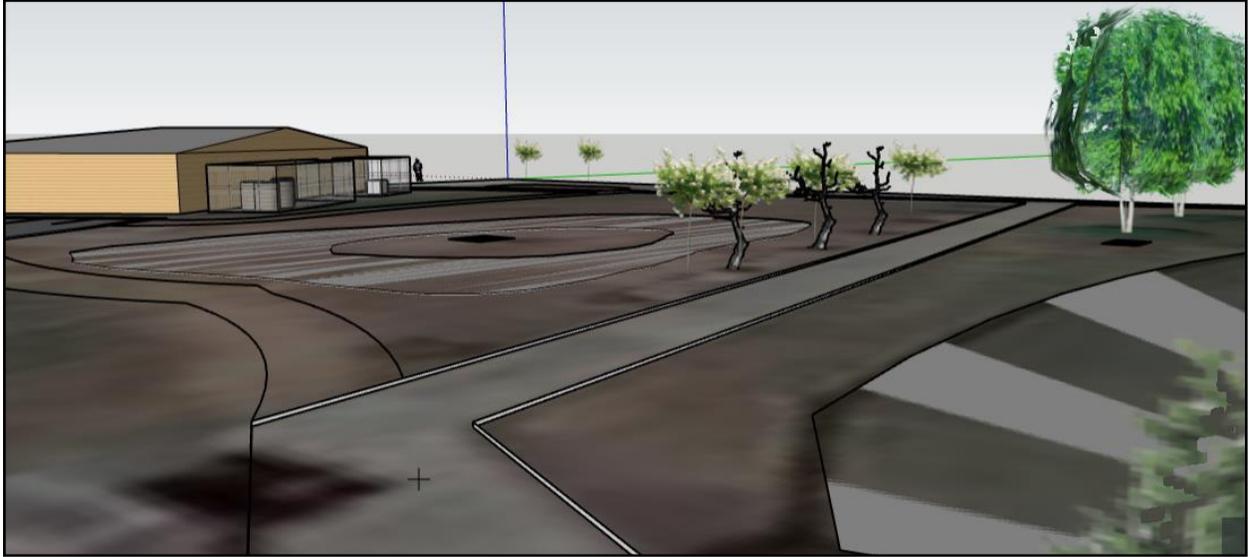


Figure 22. Sketch of current perspectives of the drain field swale with no garden. View to Northwest (top); View to West (bottom).



Figure 23. Sketch of current perspective of the drain field swale with no garden. View to Southwest (top). Photograph of recommended rain garden area in foreground, with building in back. View to the West (bottom).

Rain Garden Tie-In Garden Spots

River Birch Triangular Garden

One area within the view shed of the proposed large Rain Garden includes the triangular area across the wide sidewalk northeast of the garden. (See previous Figure 19.) This area contains three River Birch trees on sloping ground (Figure 25). The small area fronts a baseball field to the southeast and sidewalks to the north and west. The existing river birches are a good plant selection for their year-round interesting bark and

Rain Garden

HARD AT WORK HERE

Can I Do This At Home?

THE BENEFITS OF RAIN GARDENS

- Increase the amount of water that filters into the ground, which recharges aquifers
- Help protect against flooding and drainage problems
- Remove standing water in your yard
 - Help protect streams and lakes from pollutants carried by stormwater - fertilizer, car fluids, salt, pesticide
 - Perform as a natural filter, improving water quality through the removal of pollutants
 - Create habitat for birds, butterflies, dragonflies and many beneficial insects
- Native plants, once established, have longer root systems that substantially increase the ability of soil to absorb and retain water.

By building a rain garden in your yard, you can reduce the amount of pollutants that leave your property and enter our local river system.

Also, a significant benefit of rain gardens at home is that, when properly graded, they could provide extra storage for stormwater to help reduce the amount of rainwater that may sit in your yard after a rain storm.

Can you spot these plants? For a complete list of suggested rain garden plants, see the USA rain garden publication online at www.usa.rain.org

Cardinal Flower Black Eyed Susan Bee Balm Yellow Flag Iris Milkweed

The Hayes Park Rain Garden is a partnership between the City of Adairsville, Friends of Hayes Park, Bartow County Master Gardeners and Keep Bartow Beautiful

WELCOME TO OUR RAIN GARDEN

ONE OF OUR INITIATIVES TO PROTECT THE SAND RIVER WATERSHED

(It) is a garden of native shrubs, perennials, and flowers planted in a small depression, which is designed to temporarily hold, filter, and soak in rain and stormwater runoff that flows from roofs, driveways, roads, patios, or lawns. Rain gardens not only look beautiful, they also create a habitat for local wildlife such as butterflies, dragonflies, and birds.

DID YOU KNOW?

NATIVE PLANT HABITAT IS VITAL TO PRESERVING BIODIVERSITY.

By creating a native plant garden, each patch of habitat becomes part of a collective effort to nurture and sustain the living landscape for birds and other animals. Refer to www.usa.rain.org for additional benefits of incorporating native plants within your landscape.

THIS RAIN GARDEN HAS THE ABILITY TO FILTER OUT THE FOLLOWING:

Source: SC Department of Health & Environmental Control

80%	70%	35%	60%	90%	70%	90%
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AOS McCORMICK TAYLOR

Figure 24. Two examples of cheerful, educational Rain Garden signs, (top) City of Adairsville, Georgia (bottom) City of Aiken, South Carolina.

because they are well-suited to this specific spot that often contains pooled rainwater. This triangular tract can be enhanced as a small garden in its own right and as a “bookend” entrance across the wide sidewalk from the Rain Garden. Thus, visitors turning here to walk down the sidewalk to Ball Fields 5-8 will see the Triangular Birch Tree Garden on the left and the Rain Garden on the right. Plants to create the Triangular



Figure 25. River Birches on slope above wet area.

contains two crape myrtles and mown grass (Figure 27). This small island could make a huge impact on visitors’ perceptions, as it is one of the first things they see when getting out of their car and walking to the sidewalk. Also, like the River Birch area mentioned above, this island forms a “bookend” to the large Rain Garden when visitors enter the sidewalk from the west portion of the parking lot and walk down the sidewalk to the ball fields. In doing so, they see the island on the left and the large Rain Garden on the right.

With a few thoughtfully considered plantings the island could be enhanced significantly to become a small, scenic Crape Myrtle Island Garden that compliments the area and the large Rain Garden. This location gets eastern and western sun, therefore is only shaded to a small degree by the two crape myrtles. Three small shrubs of Bushy St. John’s Wort (*Hypericum densiflorum*) planted between the crape myrtles would “ground” the trees into a larger, cohesive grouping. Bushy St. John’s Wort not only provides green color and interesting, exfoliating bark on its stems in the winter, but has an explosion of yellow flowers all over it (Figure 28). Pollinators seek it out and songbirds eat its ripe seeds. It is adaptable to a variety of moisture and soil conditions. Along the outer edges of these shrubs and crape myrtles,

Birch Tree Garden around the existing river birches include the following: Cinnamon Ferns (*Osmunda cinnamomea*) and Virginia/Blue Flag Iris (*Iris virginica*).

Cinnamon Ferns are striking perennials that can extend up to 6’ tall. New “fiddle heads” provide cinnamon-colored spiral unfurling leaves, adding visual interest to this deciduous plant. Cinnamon Ferns can be planted in several clumps in the lower slopes of this garden, in predominantly shaded areas. Christmas ferns can also be used here.

The Blue Flag or Virginia Iris is a 24-36” tall native plant with 2-3 large, deep blue flowers per stem. It blooms in late spring to early summer. It can be planted in the lowest, wet elevations of this garden, beyond most of the shade from the river birches.

Crape Myrtle Island Garden

The other area directly related to the proposed large Rain Garden is the small parking island extension adjacent to the sidewalk north of the Rain Garden. This parking island is truncated on the south side by the sidewalk and encircled on the remainder by parking lots. It currently



Figure 26. Cinnamon Fern



Figure 27. Current appearance of parking island Crape Myrtles.

we recommend planting clusters of Butterfly Milkweed (*Asclepias tuberosa*), which can thrive in the hot sun and create bright orange clusters of small flowers that butterflies, moths, and hummingbirds love. Butterfly Milkweed flowers turn into visually-interesting seed pods resembling okra (Figure 29). We also recommend using the 12" tall purple blooms of the Rose Mock Vervain evergreen ground cover here as a repeating element through the park. This ground cover planted between the Butterfly Weed and edge

of the island will serve as a border that unifies the plants and signifies that this is a garden rather than a pedestrian and vehicle shortcut. [Creating the proposed gravel drive behind the rental building to the parking lot will redirect vehicle traffic to the eastern side of this island rather than through it as is currently the case.]



Figure 28. Bushy St. John's Wort.



Figure 29. Butterfly Milkweed.

Planting Islands in Concrete Walkways by Ball Fields Number 5, 6, 7 and 8

The concrete walkway truncating Ball Fields 5, 6, 7, and 8 contain two small planting islands (Figure 30). Current vegetation includes non-native elements bushes, crape myrtle, and a conifer (Figure 31). Plants selected for these areas must thrive in harsh conditions that include extreme heat (from full sun and the island effect of surrounding white concrete), limited surface area to collect

rainfall, altered soil pH from surrounding concrete, and a large amount of foot traffic from often oblivious youngsters. In addition, plant selection should include some evergreens to provide winter color. It is recommended that, minimally, the failing shrubs and conifer be removed and replaced with Georgia Savory (*Clinopodium carolinianum*) and Rose Vervain (*Glandularia canadensis*).

Georgia Savory is semi-evergreen to evergreen sub-shrub that grows from 12-18” tall (Figure 32). It can be planted around the base of the post in Figure 30 as well as along the linear, interior section of the island in Figure 31. Georgia Savory thrives in full sun and dry soils and provides greenery year-round. Its leaves



Figure 30. Small planting hole with conifer.

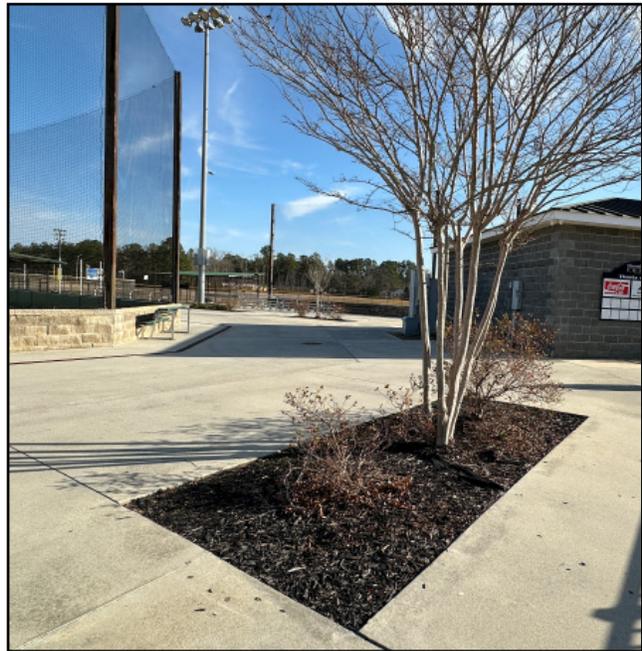


Figure 31. Larger area in need of winter color.

provide interesting texture and the plant has small pinkish white flowers in the summer. Its fragrant leaves will provide a pleasing scent if inadvertently brushed by a pedestrian.

Adding Rose Vervain to the larger island creates repetition in the park, as this plant will be located in the planting strip along Lexington Avenue, in the parking lot islands and in the rain garden. The characteristics mentioned previously make this tough perennial a bright, colorful, hardy addition to this concrete landscape. Its fragrant purple blooms occur in the spring and summer.

Retention Pond

The pond on the southeastern side of Macomber Park appears to be a retention pond (that permanently collects and holds storm water) rather than a detention pond (that temporary collects and stores excess storm water).



Figure 32. Sculptural leaves of Georgia Savory with the bonus of small flowers.

Challenges

Currently the pond is a rather sad-looking hole in the ground collecting litter and ringed by a mown grass bank, a broken chain link fence, and a patch of forlorn plants (Figure 33). Large portions of the nearby parking lot and grassy area collect water after a heavy rain. This run-off should flow freely into the pond (Figures 34 and 35).

Opportunity

The pond has huge potential to be an aesthetically beautiful and environmentally beneficial contribution to the park. By creating a naturalized area of native plants appropriate to the pond's wet and dry areas, this can become a very low-maintenance (no dangerous bank-mowing), environmental ecosystem that also filters pollutants out of the storm water from the parking lot and ball fields. Creating a naturalized garden area also will enable the retention pond to operate more successfully, taking in more water in times of heavy rains, and filtering that water to a greater degree. The installation of a small, slightly meandering channel from the parking lot to the crest of the pond berm will allow storm water that currently pools uphill to flow into the pond.



Figure 33. Current appearance of the retention pond at Macomber Park.

Short native plants in and along the meandering trench will filter the polluted water and look aesthetically pleasing as it connects to the newly enhanced pond area. Frogfruit (*Phyla nodiflora*) an evergreen ground cover with white spring flowers and purplish foliage in winter would grow nicely in the shallow meandering trench and eliminate erosion, while providing a nectar source and larval host for butterflies.

Both the sidewalk and parking areas nearby have higher elevations than the pond edges, enabling visitors a vista of the entire

pond and its surrounds. The pond area can be a beautiful focal point for park visitors walking along the ball field sidewalks to the west and those parking in the parking lot north of the pond. The pond will likely always be fenced due to safety concerns (although the fence is currently down in one area). Once the Retention Pond Natural Garden is created, the black chain link fence will provide safety, but will blend in with the native vegetation and go unnoticed by visitors. Small, shallow depressions should be dug in multiple areas along the southern and eastern sides of the fence to facilitate the movement of turtles and other wildlife. These trough depressions should be shallow enough, however, to keep toddlers out.



Figure 34. Rainwater pooling in parking lot adjacent to pond.



Figure 35. Rainwater pooling between parking lot and pond.

Figure 36 (adapted from Angell et al 2015) lists a selection of suitable plants and their locations for the Retention Pond Garden including the wetland portion, intermittent banks, and dryer berm. Such plants will absorb the water, helping keep storm water levels from becoming excessive. They will also filter pollutants from the water and offer an ecosystem for birds and wildlife. Non-native plants and aggressive natives such as cattails, swamp sunflower, and golden canna are not recommended. Figure 37 shows images of some of the those plants described below.

The Common Rush (*Juncus effuses*) is recommended for the portion of this garden in water from 18” to 3’ of water. It provides food and nesting materials for birds and wildlife. The Common Rush has 2-5’ tall stems ending in small greenish-brown flowers. It is evergreen and thrives in moist to wet soil. It attracts and is a host plant for beneficial and pest-eating insects.

Plants recommended for the 6-18” of water along the edges of the pond include: Lizards Tail (*Saururus cernuus*), Cardinal Flower (*Lobelia cardinalis*), Virginia/Blue Flag Iris (*Iris virginica*), and Seashore Mallow (*Kosteletzkya pentacarpos*).

Lizard’s Tail is a sweet citrus-smelling perennial that grows 1-2’ tall. The pretty white flowers form on slender spikes that nod in the wind. It blooms from spring to fall, although will bloom year-round if the stalks are cut back. It is a host plant for dragonfly and damselfly larvae, which eat mosquitoes when adult. The flowers of the plant feed hairstreak butterflies, bees, beetles, wasps, and other beneficial insects. The seeds of the plant feed wood ducks and other birds. The foliage is food for turtles and aquatic creatures such as small fish, birds and insects use the stems to hide. They grow in sun or part shade in up to one foot of water, or short periods of up to three feet of inundation.

The bright red blooms of the 1-6’ tall Cardinal Flower are eye-catching to people as well as hummingbirds and butterflies. This stalky flower with lush green leaves thrives in medium to wet soils in sun to shade. It is a perennial that blooms from May through October.

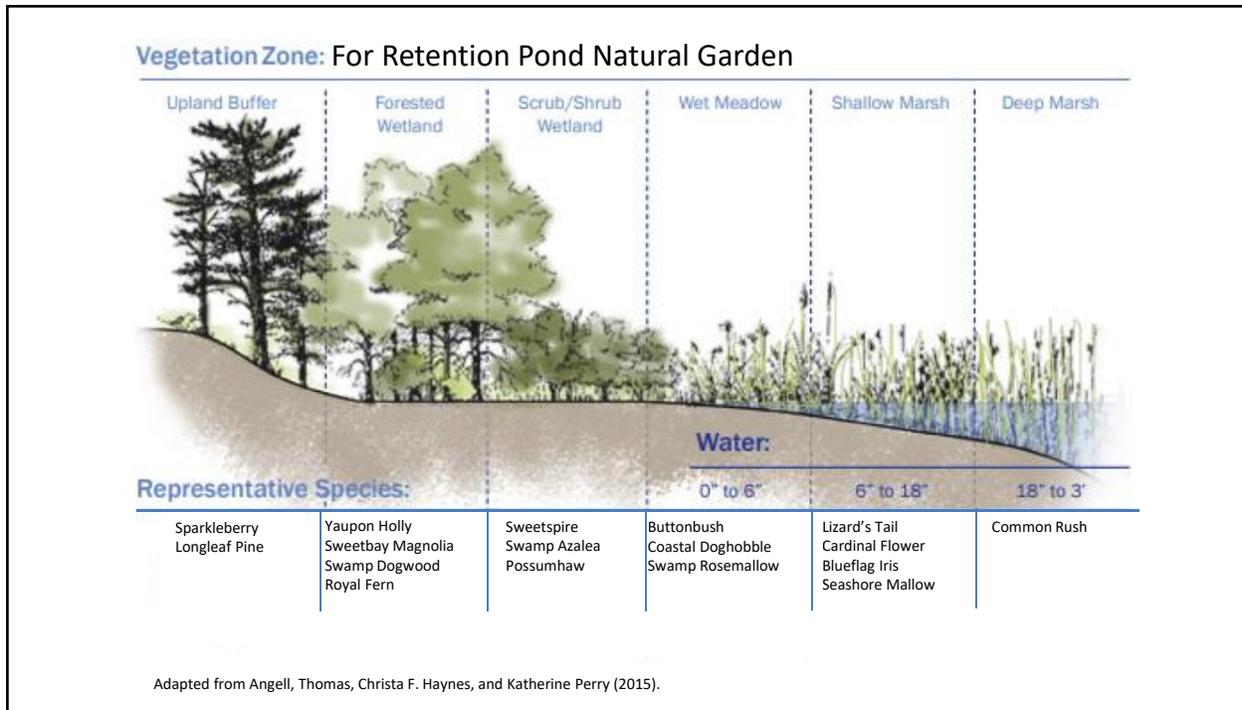


Figure 36. Suggested plants for Macomber Park retention pond.

Blue Flag Iris is another recommendation for this elevation of the pond garden. That plant is described above in this document.

Seashore Mallow grows 3-6' tall in moist, but well-drained and sunny sites. It sports pink hibiscus-shaped flowers from mid-summer to fall. The flowers attract butterflies and hummingbirds.

Plants recommended for the upper wet edge of 0-6" of water include: Buttonbush (*Cephalanthus occidentalis*), Coastal Doghobble (*Leucothoe axillaris*), and Swamp Rosemallow (*Hibiscus grandiflorus*).

Buttonbush has unusual spherical white fragrant flowers with fringe-like pistils protruding around it, resembling a pin-cushion. Buttonbush is a dark green-leafed shrub that reaches 6-12'. It is a perennial plant that grows in moist or wet, shady to partly shady environments. It attracts birds, butterflies and other pollinators, and is especially important to bees (native, bumble, and honey bees). The ornamental fruits are eaten by water birds and shore birds.

Coastal Doghobble is a 2-6' tall evergreen shrub that is fountain-like in profile and grows in moist shade to partly shaded areas. It produces clusters of white bell-shaped flowers on drooping spikes and dark green leaves. The spring flowers are followed by fall leaf color of reddish green and purple. It can be cut to the ground after flowering to rejuvenate.

Swamp Rosemallow looks like many hibiscus plants and has large pinkish white fragrant blooms with red to purple centers. The flowers attract butterflies, hummingbirds, native bees, and other pollinators. The plant grows in wet to medium moist soils in full sun to part shade. It grows to 10' tall or less. The Rosemallow blooms from March through September.



(Left to Right)
 Top Row: Common Rush, Cardinal Flower, Seashore Mallow; Middle Row: Buttonbush, Swamp Azalea,
 Possumhaw; Bottom Row: Yaupon Holly, Sparkleberry

Figure 37. Interesting variety of plants recommended for the pond garden area.

Plants recommended for the upper flat areas around the pond include: Virginia Sweetspire (*Itea virginica*), Swamp Azalea (*Rhododendron viscosum*), Possumhaw (*Ilex decidua*), Yaupon Holly (*Ilex vomitoria*), Sweetbay Magnolia (*Magnolia virginiana*), Swamp Dogwood (*Cornus foemina*), and Royal Fern (*Osmunda regalis*).

Virginia Sweetspire is a deciduous to semi-evergreen shrub growing from 4-6' tall. It thrives in full sun to part shade and wet soils to medium or dry soils. In May and June fragrant flowers bloom on bottlebrush-like tips of the branches and in the fall the leaves turn bright bronze and red. Bees and butterflies drink the flowers' nectar and birds eat the seeds from the plant.

The native Swamp Azaleas (not the common azaleas seen everywhere) are elegant fragrant flower clusters blooming in summer on deciduous shrubs 5-8' tall. The leaves turn brilliant orange, yellow and purple colors in the fall. It grows in moist to well-drained soils, but will tolerate periodic flooding. It grows in full sun to part shade. Hummingbirds, birds, and butterflies feed on Swamp Azaleas.

Possumhaw is a deciduous holly growing 7-15' tall. It has a spreading crown and brilliant orange-red berries on the female plants. (Need at least one male plant for pollination. Flowers are inconspicuous, but provide nectar for butterflies and other pollinators before turning into berries. The ripe berries stay on the plant from September through mid-March and are food for songbirds and small mammals. Possumhaw grows in a range of conditions from good to moist and occasionally wet soils in full sun or partial shade.

Yaupon Holly is an evergreen shrub ranging on average from 12-25' in height. When male plants are in pollination range, female plants produce bright red berries. This holly is widely adaptable to sun through partial shade and dry to moist soils. The flowers attract insects and pollinators, while birds and mammals eat the fruit. Birds nest in the branches.

Sweetbay Magnolia is a small understory tree with a mature height of 10-20 feet. It thrives in full sun and moist soil, but can do well in part shade and dryer soils. It can tolerate occasional flooding. The tree blooms in late spring to early summer with fragrant white flowers in front of deciduous to semi-evergreen, dark green leaves. These flowers become seed-studded cones in late summer and fall, and are eaten by birds.

Swamp Dogwood grows 10-25' tall and has clusters of white flowers in spring followed by blue fruit in the fall. It lives in full sun to part shade and tolerates wet soil. Flowers attract pollinators, the leaves are host for select butterfly larvae, and the fruit is eaten by songbirds and mammals.

Royal Ferns are suggested for moist, shaded soils. This plant specimen was described in detail earlier in this document.

Plants recommended for the berm and uppermost areas around the pond include: Sparkleberry (*Vaccinium arboretum*) and Longleaf Pine (*Pinus palustris*).

Sparkleberry is an understory tree related to the blueberry. It grows to 18-25' in full sun or partial shade. It does well in sandy dry soils, but can tolerate occasional wet soil. It is deciduous to occasionally evergreen. Small fragrant bell-shaped flowers hang from the branches in spring and attract pollinators. These flowers turn to bluish-black berries in the fall that attract birds and mammals throughout the winter.

Longleaf Pine is a tall evergreen tree at 80-150 feet. It grows in full sun and dry to medium moist soil, yet tolerates seasonally poor drainage. As its name implies, it has long bright green needles and both the longest needles and largest cones of any pines in the eastern part of North America. The Longleaf Pine is a host for

certain moth larvae, provides winter cover, and has seeds eaten by fox and gray squirrels, quail, nuthatches, mourning doves and turkeys. Groups of longleaf pines provide housing for red-cockaded woodpeckers.

Many or all of the plants above can be used in the Retention Pond Garden. Turning this water-holding retention hole into a naturalized pond garden will create a beautiful ecosystem that visitors can enjoy from the walkways, parking lot, and surrounding areas, and will ultimately attract pollinators, beneficial insects, and many more birds than this lone egret (Figure38).



Figure 38. With appropriate native plantings, this lone egret could be joined by a variety of birds, insects, mammals, and pollinators.

Chapter 3. Best Practices and Summary

Plants

The plants recommended throughout this document are native to the lower coastal plain ecoregion of Georgia, “Native plants are known to support a greater abundance and diversity of bees, butterflies, and other wildlife” (Xerces Society for Invertebrate Conservation). Native plants are more likely to be successful and require no pesticides, and little fertilizer, pruning or mowing. The native plants recommended are: tolerant of varied soil, moisture, and growing conditions; low maintenance; attractive and available in native nurseries, provide a diverse array in terms of color, bloom time, texture, wildlife and pollinator use, are a mixture of evergreen and deciduous, and contribute interesting year-round or seasonal features. The recommended plants are not invasive and do not have aggressive root systems (Giovengo 2024). The variety of native plants recommended for the Macomber Gardens provide an array of items for supporting pollinator and bird habitats. This includes plants that provide food directly or food for insects that are food for other species. It also includes plants that are hosts plants and plants that provide food throughout various seasons for stationary and migratory species. Such food consists of nectar, pollen, berries, and leaves. The recommended native plants also offer shelter, nesting materials, and protection. It is hoped that the gardens and their native elements will combine to create a native ecosystem that will directly benefit the Rincon Branch habitat adjacent to Macomber Park.

“Invasive species: Any species that is not native or indigenous to a given region. These species are highly aggressive and disrupt natural reproductive cycles of fauna and flora of the communities they invade” (Angell et al 2015).

“When invasive plants are taken out of their original environments, they are liberated of native pests and plant competitors. Without these natural controls, invasive plants are free to seed, grow, and spread virtually unchecked... dominating a once diverse landscape. Birds, insects, and other wildlife that are dependent on the native plant communities for food and habitat suffer great losses” (Angell et al 2015).

To ensure planting success, all plants should be purchased from reputable native nurseries that propagate their own stock from the coastal plain within a 150-mile radius of Rincon. This will ensure that the plants are suitable for this area, not harvested from the wild, and not grown with the deadly neonicotinoid pesticides that kill polinators. It is recommended that plants be purchased in containers or as plugs rather than bare root plants or seeds. The former have good roots already and become established quickly. Seeds are likely to float away in a rain garden or allow weed infestation before they can grow and become established. Four-inch containers or larger of grasses and perennials are recommended. Shrubs and small trees should be purchased in 15 gallon or smaller containers as these will grow quicker and become established better (Giovengo 2024). Planting should not occur during the summer, as this will result in dead plants due to stress from extreme temperature and dryness. Spring and fall are the best times for planting in our area.

In our plant recommendations we have attempted to follow best practices to “...select the “true” or “pure” native species (scientific Latin genus and species name such as *Rudbeckia fulgida*), especially if planting for wildlife and pollinator benefit” and we have tried to “avoid the cultivated varieties (‘cultivars’ or ‘nativars’) available for some native plants. Such cultivars are named using the scientific name plus the cultivar name, a third word in single quotation marks (such as *Rudbeckia fulgida* ‘Goldstrum’)” (Giovengo 2024:2). Native plants modified to grow different colors or intensities and/or various flower shapes or clusters usually result in plants that no longer serve the native ecosystem. For example pollinators cannot see the new colors or physically reach the pollen due to the different and inaccessible shapes of the flowers.

Plants recommended in this document include ones with visual interest throughout the year. This includes plants that bloom at different seasons and/or have interesting bark, seed pods, leaf color, structural forms, and textures and are a combination of evergreen and deciduous.

Funding and In-Kind Assistance for Macomber Gardens

Potential funding sources for the Macomber Park enhancements may include recreation funds and other municipal revenues. In addition, federal and state grants are possible funding sources, particularly for the rain garden, parking lot island gardens, and retention pond garden, as there is a push to create such gardens to mitigate storm water flooding and resulting pollution issues. One such potential grant resource (or entity that may direct Rincon to funding sources) includes the University of Georgia Marine Extension and Georgia Sea Grant program. Brief research can undoubtedly locate other sources of potential funding.

While funding will be necessary to purchase plants, soil, compost, mulch and similar items, volunteer labor, under skilled guidance, can reduce the cost of installing and maintaining the garden until it is well-established. Volunteer labor also creates valuable stakeholder/ownership of the gardens within the community. Such community ownership instills pride and the desire to take care of the gardens and share that desire with others. Effingham Georgia Green is willing to help with the gardens until they become established (and thus easier to maintain) by assisting in providing several opportunities for community members interested in volunteering for garden planting and maintenance. These opportunities would include initial planting and follow-up weeding as needed until the plants are established. Initial watering when necessary until the gardens are established can be undertaken by a temporary irrigation system in the large Rain Garden, by tree bags in the Road Frontage Garden, and watering by maintenance staff in the parking islands gardens and two small planting islands by the concession stand. EGG is also willing to research partnership opportunities with organizations like the Savannah Tree Foundation, who routinely has extremely successful tree planting opportunities for volunteers not only in Savannah but also in Effingham County. Once the gardens are planted, EGG will create an easy to follow “Care Booklet” that will outline the care and low maintenance of the gardens for park staff and volunteers. A digital copy of this booklet will be kept on file so that EGG can make recommendations as the gardens grow and evolve. EGG offers to provide regular inspections of the Macomber Park gardens to ensure that they are doing well and have no issues with erosion, excessive sediment deposits, or dead/diseased plants. Once the gardens are established, only a low level of maintenance will be needed, and mowing and pruning will be virtually eliminated in those areas.

Priorities and Later Enhancements

The items outlined in this document represent a significant amount of investment of time, labor and funding initially, with great benefits following. Four specific areas were recommended as priorities because they provide the “biggest bang for the buck” in terms of aesthetics, environmental benefits, and decreased long-term maintenance. Additional areas of the park would benefit from introducing native plants where there are none or using native plants to replace existing non-natives, thereby eliminating heavy pruning, watering, and stressed plants not suitable for their environment. A few examples of future areas to focus on include the hedges along the side of the rental building, additional parking lot islands and drain fields, and grass surrounding the ballfields that is devoid of native ground covers. An equally important step in this process would be to connect garden areas when possible, such as the linking the pond garden to new native plantings on the northern, eastern, and southern perimeters of the park. It is recommended that these areas be revisited for design and plant recommendations once the first four enhancement areas are created and become established (unless funding is available sooner and overall park redesign/re-engineering catapults these areas to the forefront for attention).

Summary

This document outlines four focus areas within Macomber Park that can be greatly enhanced through the creation of thoughtful environmental design that will benefit current park users, new visitors, maintenance staff, the recreation department maintenance budget, Rincon Branch and its associated waterways of Dasher Creek, Abercorn Creek and other Savannah River tributaries, the environment, and residents of Rincon and Effingham County. Investing time and limited funds now will have huge dividends in the future and will help make Macomber *Park* be a true park for all residents -beautiful and environmentally beneficial and a recreation field that can be enjoyed by all.

References Cited

Angell, Thomas, Christa F. Haynes, and Katherine Perry

2015 A Maintenance Guide for Constructed Wetlands of the Southern Coastal Plain. Retrieved on April 7, 2024 from <https://coastalwildscapes.wildapricot.org/resources/Documents/Projects%20Tab/Cay%20Creek/Wetland%20Manual.pdf>

Brown, Jessica T.R. and Keren E. Giovengo

2020 Rain Gardens in Coastal Georgia: A Guide for Residents. University of Georgia Marine Extension and Georgia Sea Grant, Athens, Georgia.

EcoScapes

2024 Georgia Coastal Plain Native Plants for Conservation Landscaping and Wildlife Habitat. University of Georgia Marine Extension Service and Georgia Sea Grant College Program. Accessed at <https://ecoscapes.bugwood.org/>

Effingham Herald

2014 “Park Stretches Out Rincon Ready to Play on Macomers Four New Green Fields”. May 5, 2014. Accessed at <https://www.effinghamherald.net/local/around-town/park-stretches-out/>

Giovengo, Keren

2024 Bioretention Plant Guidance for Coastal Georgia. University of Georgia Marine Extension and Georgia Sea Grant, Athens, Georgia. Accessed on April 6, 2024 at National Oceanic and Atmospheric Administration at <https://repository.library.noaa.gov>

Massachusetts Office of Coastal Zone Management (MOCZM)

2022 “Stormwater Solutions for Homeowners Fact Sheet: Rain Gardens”, Boston, MA. Retrieved online March 26, 2024 at www.mass.gov/czm

Savannahnow

2015 “Rincon’s Macomber Park Expansion Celebrated”. September 10, 2015. Accessed at <https://www.savannahnow.com/story/news/2015/09/10/rincons-macomber-park-expansion-celebrated/13566692007/>

2006 “Rincon Officials Target Westside Area for New Park”. September 13, 2006. Accessed <https://www.savannahnow.com/story/news/2006/09/13/rincon-officials-target-westside-area-new-park/13827042007/>

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