



Environmental Advisory Committee

4:00 p.m., Wednesday, January 17, 2024

Council Chambers

1207 Palm Boulevard, Isle of Palms, SC 29451

Agenda

- 1. Call to order** and acknowledgment that the press and the public have been duly notified of the meeting in accordance with the Freedom of Information Act
 - 2. Nomination and election of Chair and Vice Chair**
 - 3. Citizen's Comments**
 - 4. Approval of previous meeting's minutes** – December 14, 2023
 - 5. Presentations**
 - 6. Old Business**
 - i. Wildlife- discussion of native plant exhibition and classes
 - ii. Litter
 - iii. Water Quality- update on potential water quality testing program
 - iv. Climate Action- update on solar panel grant request
 - v. Update on Sea Level Rise Adaptation RFP
 - 7. New Business**
 - 8. Miscellaneous Business**
- Next meeting date: 4:00 p.m., Thursday, February 8, 2024
- 9. Adjournment**



ENVIRONMENTAL ADVISORY COMMITTEE

4:00pm, Thursday, December 14, 2023

1207 Palm Boulevard, Isle of Palms, SC

and broadcasted live on YouTube: <https://www.youtube.com/user/cityofisleofpalms>

MINUTES

1. Call to order

Present: Deb Faires, Sandra Brotherton, Mary Pringle, Linda Plunkett, Jordan Burrell, Jonathan Knoche, Belvin Olasov

Absent: Doug Hatler, Council Member Bogosian

Staff Present: Director Kerr, Zoning Administrator Simms

2. Approval of previous meeting's minutes

MOTION: Ms. Pringle made a motion to approve the minutes of the November 9, 2023 meeting, and Dr. Plunkett seconded the motion.

Dr. Plunkett noted the proper spelling of Sharleen Johnson's name for the minutes.

VOTE: The amended minutes were approved unanimously.

3. Citizen's Comments -- none

4. Old Business

A. Wildlife

Committee members discussed the location for the first native plant garden, the classes on native plants, and the promotion of the garden. The Committee agreed the best location for the garden is the triangle plot at 7th Avenue and Palm Boulevard. Director Kerr said he would ask Ms. Johnson to prepare a design that he will share with the Water & Sewer Commission at their January 17 meeting. As the plot of land is owned by the Commission, anything done there must be approved by them. He will have Ms. Johnson incorporate some benches into the garden design as the Exchange Club may donate some to the project.

Director Kerr will work with Director Farrell to secure a date for the first native plant class at the Recreation Center in late January/early February. Ms. Johnson has 3-4 additional classes that she will be able to present should there be an interest following the initial offering. The City's PR Officer will prepare press releases about the project and reach out to Committee members for quotes and further information. Once those press releases are approved by the Committee and the

Water & Sewer Commission, she will put it out on all the City's social media channels. Ms. Pringle will work on writing something for the *Island Eye*.

Additional conversation ensued about the need for roadside signage identifying the garden as a project of the Environmental Advisory Committee.

B. Litter

Director Kerr reported that additional glass recycling bins will be placed at Breach Inlet after the beach restoration efforts are completed.

Discussion ensued about the effort to secure high school students seeking volunteer hours to empty the butt cannisters in the summer. Committee members suggested that Susan Smith could help with signing off on those hours as part of the IOP Clean Up Crew. Ms. Burrell said she would send an email to Director Kerr requesting that assistance, and Director Kerr will approach Ms. Smith.

C. Water Quality

Committee members discussed the numerous tests available for water quality testing and questioned if all of them are necessary for the Isle of Palms. Dr. Brotherton would like further clarification on exactly which tests are needed and why. The cost of the testing could be lowered if not all the tests are needed.

A brief discussion ensued about the Clean Marina Program. Director Kerr said the City is limited in what it can do at the marina as it is under the control and lease of a third party. However, he believes that tenant is supportive of the efforts of a clean marina, and it's likely the initiatives of the Clean Marina Program could be achieved following discussion with the tenant.

D. Climate Action

Mr. Olasov shared information about a block grant being awarded to municipalities that would like to engage in the use of renewable energy on municipal buildings. However, the application deadline is January 8. Director Kerr said it might be difficult to complete such an application by that time. Mr. Olasov suggested that the City may have a good chance at receiving such a grant because of the number of available grants and the number of municipalities who qualify. Director Kerr said the Public Works building might be a better option for solar panels since it is a bigger building with a more visible roof.

E. Update on Sea Level Rise Adaptation RFP

Director Kerr said there will be a meeting of the City's engineers and Seamon Whiteside about the City's infrastructure and potential threats to it. They will "identify the rate at which they think they should plan for the next 50 years." The results of that meeting will be shared with the Committee.

5. New Business

Director Kerr updated the Committee on the beach restoration project. He said the first batch of sandbags “gave up” and Public Works crews have been picking up the destroyed bags. The bags at Breach Inlet only have to last until the start of the Army Corps of Engineers’ beneficial use project begins in late January. A second set of tougher bags will be placed at Beachwood East in the near future.

6. Miscellaneous Business

Dr. Brotherton expressed appreciation for the outgoing Committee members.

7. Adjournment

The next meeting of the Environmental Advisory Committee will be Thursday, January 11, 2024 at 4pm.

Dr. Plunkett made a motion to adjourn, and Dr. Brotherton seconded the motion. The meeting was adjourned at 5:05pm.

Respectfully submitted,

Nicole DeNeane
City Clerk

EAC Native Planting Project Narrative

The City of Isle of Palms' Environmental Advisory Committee has recently begun considering ways to promote and encourage residents to plant more native species on the island. The idea initially drew inspiration from Kiawah's "Naturally Kiawah" Recognition program and their various initiatives related to environmental stewardship and promotion of native landscapes.

Native plants refer to plants that occur naturally in a specific region, ecosystem, or habitat without human introduction (National Wildlife Federation; Audubon Society). Moreover, they refer to plants that are adapted to local climatic and soil conditions and have co-evolved with other naturally occurring species such as insects and birds. In contrast, non-native or exotic plants are introduced plants that do not naturally occur in a specific region. Non-native plants do not always pose a threat to native wildlife and sometimes can become naturalized. However, they do not support native wildlife as well as native plants and are generally not as well adapted to the local environment. In some cases, they can even become invasive species that are detrimental to native species and natural habitats.

Aside from their compatibility with local soils and climatic conditions, native plants provide many benefits to people, wildlife, and landscapes. Firstly, native plants support and preserve native biodiversity by providing food sources and habitat. Because native plants coevolved with local wildlife, they are more equipped than non-natives to sustain and attract local wildlife and are crucial to maintaining the balance of natural ecosystems. Second, native plants require much less resources and maintenance than non-natives. Non-natives are typically maintained with significant levels of water resources, fertilizers, pesticides, and fossil fuel-based equipment. Native plants, on the other hand, if grown in conditions (soil type and soil moisture and light exposure) that match the conditions where they grow naturally, are adapted to local conditions and are more resilient to common pests and diseases. Thus, they generally require fewer resource inputs and less maintenance to thrive. Lastly, native plants are highly valued for their beauty and sense of place they provide. They reflect the natural landscape and are a way to preserve the natural history of a particular region (South Carolina Wildlife Federation).

Two-Tiered Approach

To meet this objective of encouraging more native planting on the island, the Environmental Advisory Committee have explored a two-pronged approach thus far:

1. **Educational Seminars on Native Plants:** provide a limited series of seminars to educate people about native plants and promote their adoption. These classes would cover multiple topics including what native plants are and the benefits they provide, compatible conceptual designs and best practices, how to get started, etc. The City would engage with local nurseries, experts, and consultants familiar with each respective subject matter and present at the classes, ideally held at the IOP Recreation Center.
2. **Demonstration Garden/Pilot Garden:** dedicate a portion of available green space on the island for a demonstration garden that features various native plants feasible for

City of Isle of Palms Native Plant Demonstration/Pollinator Garden @ Palm Blvd and 7th Ave

**Site Preparation Notes, Plant Photos + Details,
General Layout, and Maintenance Notes**



**Prepared by Sharleen Johnson
Native Plants to the People, LLC
January 10, 2024**

Site Preparation Notes

- Goal: Complete site preparation in late February to early March, and plant in mid- to late-March (as soon as plants are available)
- Grass removal is a key step – it's time-consuming, but if done will thoroughly will dramatically reduce the future burden of weeding out turf grass. Remove as many roots as possible during the preparation stage!
 - Method for small gardens like this one: Use a shovel with a flat bottom edge, cutting chunks of turf about 1 ft x 1 ft, make a shallow horizontal cut underneath, and then flip the turfgrass upside-down to expose the soil and roots to the sun (dries the soil and makes it easier to separate the precious topsoil from the roots)
 - Knock the topsoil off the roots and place the grass squares into landscape waste bags for Charleston County landscape waste pick-up → compost
 - After removing the large chunks of grass and roots, rake the area with a short-tined metal rake and remove any remaining grass/weed roots discovered in this process
 - Level the soil surface with the flat back of the rake
- Install edging (to prevent turf grass from spreading into the garden, and to establish a clear boundary between turf maintenance and garden maintenance).
- Spread 1" of compost over the surface of the new garden beds (no need to mix it into the soil) and then spread 3" of pine straw over the surface of the garden beds that are not flood-prone. A thick layer of pine straw prevents weed seed germination, retains soil moisture, moderates soil temperature, gradually adds organic matter to the soil, and provides habitat for beneficial insects and lizards.

Blue-eyed Grass (*Sisyrinchium nashii* ‘Suwannee’)

Plant Type: Perennial Wildflower
Evergreen?: Yes
Height: 8-10"
Width: 12"

Sunlight: Full/Part Sun
Soil Moisture: Medium
Tolerates: Deer/Drought
Bloom Period: Early Spring



Garden Uses:

- This petite, tidy, evergreen plant works well in formal and informal gardens, especially arranged in perky clumps near pathways

Pollinator Benefits:

- The flowers support adult syrphid flies, whose larvae feed on aphids

Lance-leaf Coreopsis (*Coreopsis lanceolata*)

Plant Type: Perennial Wildflower
Evergreen?: Yes (basal rosette)
Height: 1-2 ft
Width: 1-2 ft

Sunlight: Full Sun/Part Sun
Soil Moisture: Medium/Dry
Tolerates: Deer/Drought
Bloom Period: Spring + beyond



Garden Uses:

- A carefree plant with large cheerful booms well-suited for sunny pollinator gardens with medium/dry soil
- Spreads by seed

Wildlife Benefits:

- Flowers provide nectar and pollen to **butterflies**, **syrphid flies**, and **bees** (including 7 species of SC specialist bees)
- Birds eat the seeds

Lyre-Leaf Sage (*Salvia lyrata*)

Plant Type: Perennial

Evergreen?: Yes (Basal Rosette)

Height: 1-2 ft (when in bloom)

Width: 0.5-1 ft

Sunlight: Full Sun/Part Shade

Soil Moisture: Medium/Moist

Tolerates: Deer/Drought/Wet Feet

Bloom Period: Spring



Garden Uses:

- Excellent spreading (by seed) evergreen groundcover with lovely tubular purple blooms in spring

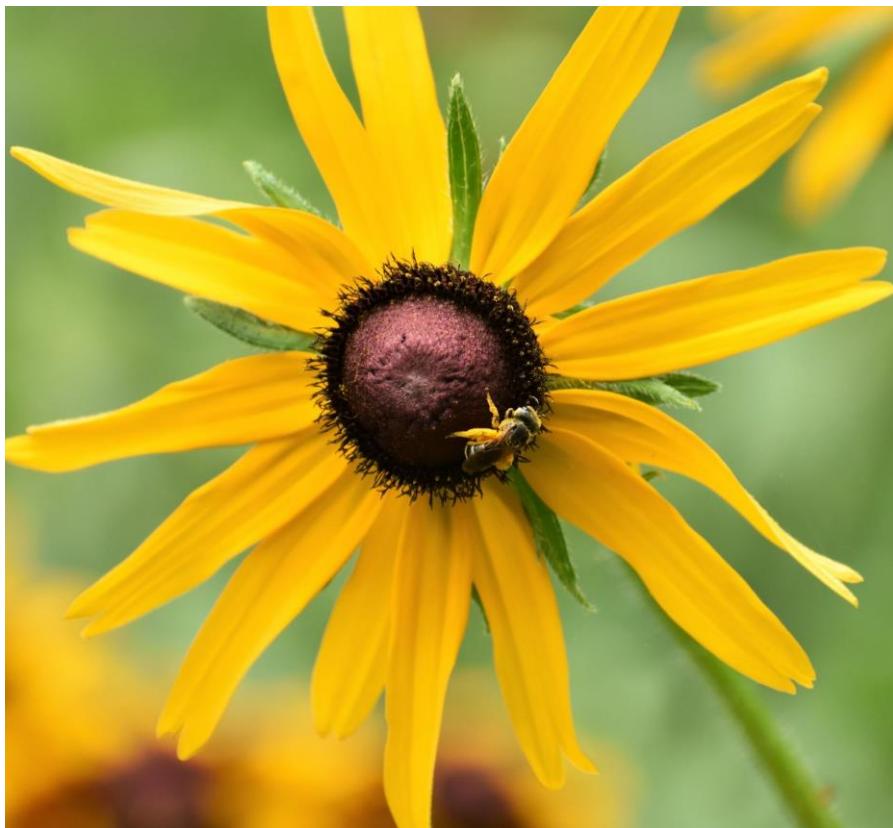
Pollinator Benefits:

- **Hummingbirds and butterflies** benefit from lyreleaf sage's mid-spring production of nectar and pollen, often on roadsides
- Plants in the *Salvia* genus serve as **larval host plants** for 7 species of SC butterflies/moths

Black-eyed Susan (*Rudbeckia hirta*)

Plant Type: Annual (re-seeds)
Evergreen?: No
Height: 2 ft
Width: 1-2 ft

Sunlight: Full Sun
Soil Moisture: Medium/Dry
Tolerates: Deer/Drought
Bloom Period: L. Spring/E. Summer



Garden Uses:

- A care-free late spring/early summer wildflower IF planted in a sunny location with excellent drainage
- In coastal SC, tends to succumb to our heat/humidity by mid- to late-summer, so grows well planted with Dune Sunflower (which is ready to fill *lots* of space by that stage of its growing season)

Pollinator Benefits:

- Flowers provide nectar and pollen to **butterflies and bees**
- Plants in the *Rudbeckia* genus serve as **larval host plants** for 15 species of SC butterflies/moths

Turk's Cap Hibiscus (*Malvaviscus drummondii*)

Plant Type: Perennial/Shrub-like
Evergreen?: No
Height: 4-5 ft
Width: 3-4 ft (shade → wider)

Sunlight: Full Sun/Part Shade
Soil Moisture: Medium
Tolerates: Deer/Drought/Salt
Bloom Period: Summer/Fall



Blanket Flower (*Gaillardia pulchella*)

Plant Type: Annual (re-seeds)
Evergreen?: No
Height: 2-3 ft
Width: 2-3 ft

Sunlight: Full Sun
Soil Moisture: Medium/Dry
Tolerates: Drought
Bloom Period: L. Spring-to-Frost



Garden Uses:

- Blanket Flower has **major flower power**, blooming continuously from late spring through early winter (dying back after the first frost)
- A fantastic option for **pollinator gardens** and **cottage gardens**
- Plants self-seed freely!

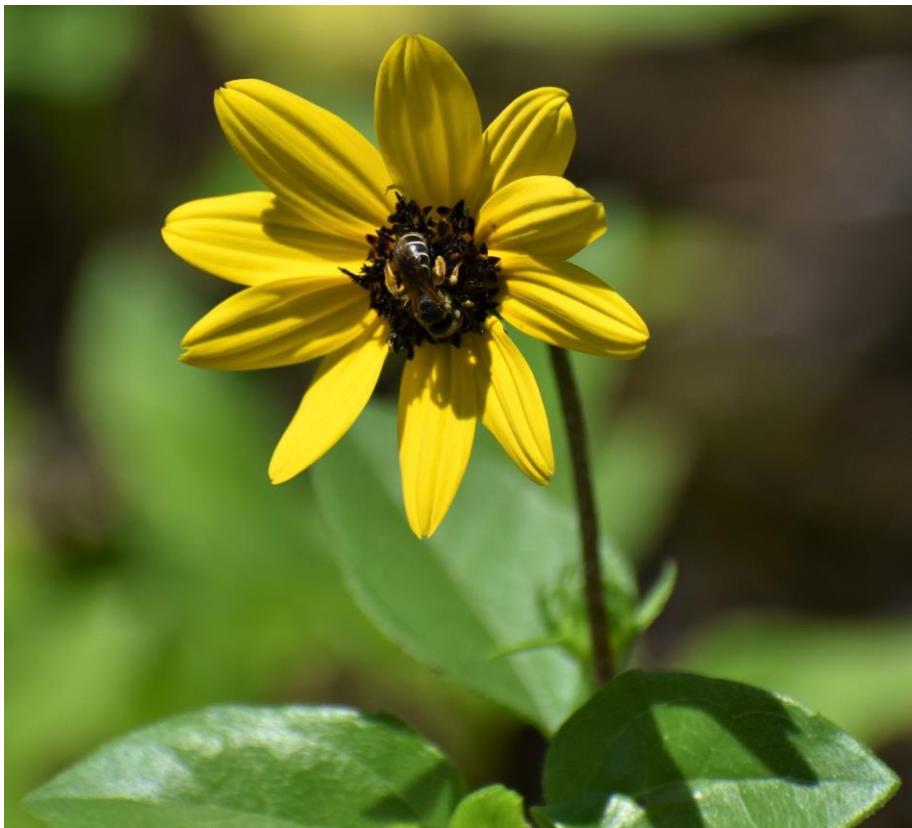
Pollinator Benefits:

- **Butterflies and bees** benefit from the generous, long-season production of nectar and pollen

Dune Sunflower (*Helianthus debilis*)

Plant Type: Annual (re-seeds)
Evergreen?: No
Height: 2 ft
Width: 2-8 ft (sprawls)

Sunlight: Full Sun
Soil Moisture: Medium/Dry
Tolerates: Drought
Bloom Period: L. Spring-to-Frost



Garden Uses:

- A reliably **long-blooming wildflower with attractive, shiny leaves** for **full-sun, well-drained locations** such as sand dunes and the median of James Island's Folly Road
- Grows well mixed with Black-eyed Susan and Blanket Flower

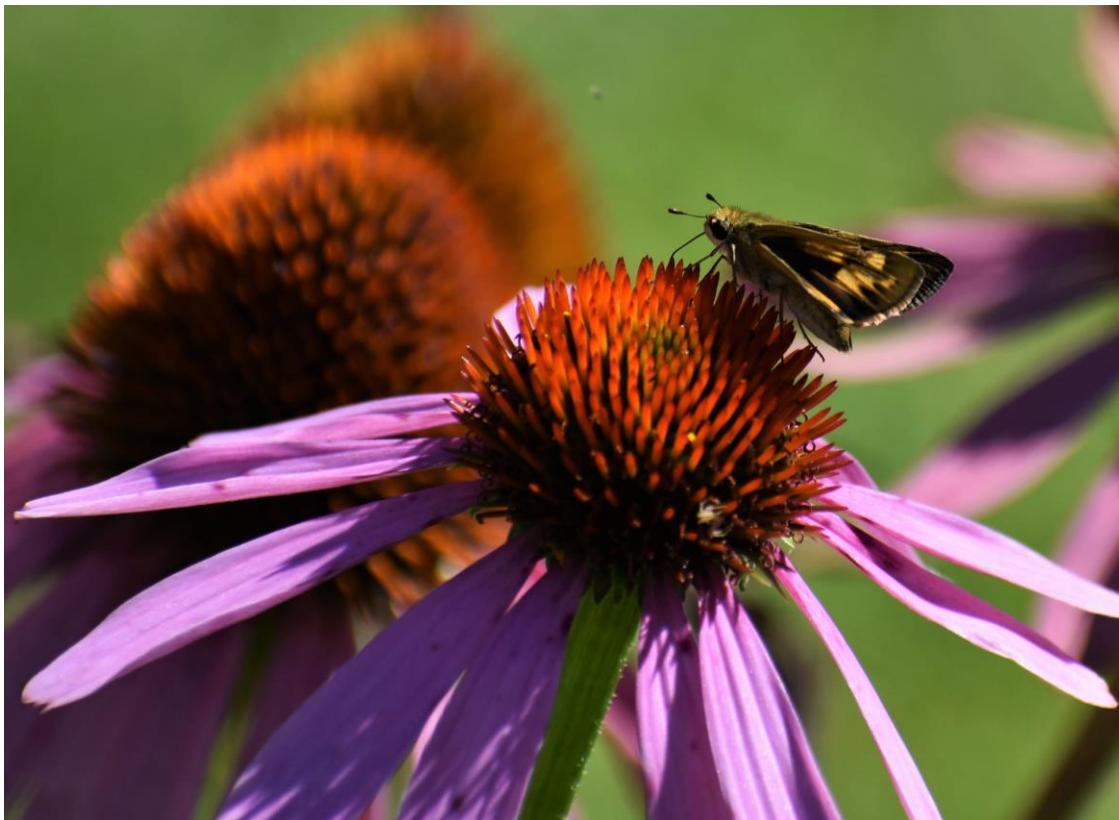
Wildlife Benefits:

- Flowers provide nectar and pollen to **butterflies and bees** (including 17 species of SC specialist bees), and birds eat the seeds
- Plants in the *Helianthus* genus serve as **larval host plants** for 58 species of SC butterflies/moths

Purple Coneflower (*Echinacea purpurea*)

Plant Type: Perennial Wildflower
Evergreen?: No
Height: 3 ft
Width: 1-2 ft

Sunlight: Full/Part Sun
Soil Moisture: Medium
Tolerates: Deer/Drought
Bloom Period: Summer



Garden Uses:

- The sturdily upright blooms add a lovely element to **meadow gardens, pollinator gardens, and cottage gardens**

Ethnobotanical Note:

- The roots, leaves, and flower petals of Echinacea have a long tradition of **use in herbal medicine**

Wildlife Benefits:

- Flowers provide nectar and pollen to **butterflies and bees**
- Goldfinches eat purple coneflower seeds** after the petals drop

Scarlet Sage (*Salvia coccinea*)

Plant Type: Annual (re-seeds)
Evergreen?: No
Height: 1-3 ft
Width: 1-2.5 ft

Sunlight: Full Sun/Part Shade
Soil Moisture: Medium/Moist
Tolerates: Deer/Drought
Bloom Period: L. Spring-to-Frost



Garden Uses:

- Scarlet sage has **major flower power**, blooming continuously from late spring through early winter (dying back after the first frost)
- A fantastic option for **pollinator gardens** and **cottage gardens**
- Plants self-seed freely!

Pollinator Benefits:

- **Hummingbirds, butterflies, native bees, honey bees**, and syrphid flies benefit from scarlet sage's generous, long-season production of nectar and pollen

Foxglove Beardtongue (*Penstemon digitalis*)

Plant Type: Perennial Wildflower
Evergreen?: Yes (basal rosette)
Height: 2-4 ft
Width: 1.5-2 ft

Sunlight: Full Sun/Part Shade
Soil Moisture: Moist/Dry
Tolerates: Drought/Dry Shade
Bloom Period: L. Spring/E. Summer



Garden Uses:

- Upright flower spikes add pizzazz to a **pollinator or meadow garden**, and are well-suited for planting **along a forest edge**

Pollinator Benefits:

- Flowers provide nectar and pollen to **hummingbirds, butterflies, and bees**
- Plants in the *Penstemon* genus serve as **larval host plants** for 9 species of SC butterflies/moths, including the Common Buckeye

Dense Blazing Star (*Liatris spicata*)

Plant Type: Perennial
Evergreen?: No
Height: 3-4 ft
Width: 0.5-1.5 ft

Sunlight: Full Sun
Soil Moisture: Moist/Medium
Tolerates: Drought/Deer
Bloom Period: Summer



Garden Uses:

- Particularly attractive when planted in a grouping of 5 or more in a pollinator meadow garden
- Flower stalks need full sun in order to grow upright (and not flop)
- Roots require good drainage during winter dormant season

Pollinator Benefits:

- Flowers provide nectar and pollen to **butterflies and bees**
- Plants in the *Liatris* genus serve as **larval host plants** for 5 species of SC butterflies/moths, including the Wavy-lined Emerald Moth

Butterfly Milkweed (*Asclepias tuberosa*)

Plant Type: Perennial Wildflower
Evergreen?: No
Height: 1-2 ft
Width: 1-2 ft

Sunlight: Full/Part Sun
Soil Moisture: Medium/Dry
Tolerates: Deer/Drought
Bloom Period: Summer



Garden Uses:

- Butterfly Milkweed can be challenging to establish in a garden, but as a larval host plant for monarch butterflies, it can serve an important role in a **sunny butterfly garden with well-drained soil**

Pollinator Benefits:

- Nectar and pollen for butterflies and bees
- **Larval host plant for monarch butterflies**

Wild Bergamot (*Monarda fistulosa*)

Plant Type: Perennial

Evergreen?: No

Height: 2-4 ft

Width: 2-3 ft (spreads)

Sunlight: Full Sun/Part Shade

Soil Moisture: Medium

Tolerates: Drought/Deer

Bloom Period: Summer



Garden Uses:

- A sturdy, reliable summer bloomer for pollinator and herb gardens

Ethnobotanical Note:

- The leaves of Wild Bergamot contain the oil thymol (which has antiseptic and vermifuge properties), and have a long tradition of use in herbal medicine

Pollinator Benefits:

- Flowers provide nectar and pollen to **hummingbirds, butterflies, and bees**
- Plants in the *Monarda* genus serve as **larval host plants** for 10 species of SC butterflies/moths, including Sphinx Moths

Orange Coneflower (*Rudbeckia fulgida* var. *fulgida*)

Plant Type: Perennial Wildflower
Evergreen?: Yes (basal rosette)
Height: 3 ft (when flowering)
Width: 2 ft

Sunlight: Full/Part Sun
Soil Moisture: Medium/Moist
Tolerates: Deer/Drought
Bloom Period: L. Summer/E. Fall



Garden Uses:

- With its **tidy evergreen basal rosette** and generous production of **sunny, upright, durable blooms** in late summer, Orange Coneflower has a lot to offer to both formal and informal gardens
- A good choice for **pollinator gardens** and **rain gardens**

Pollinator Benefits:

- A concentrated bloom in late summer through early fall supplies nectar and pollen for **butterflies and bees**
- Plants in the genus *Rudbeckia* serve as **larval host plants** for 15 species of SC butterflies/moths

Spotted Beebalm (*Monarda punctata*)

Plant Type: Perennial

Evergreen?: Yes (basal rosette)

Height: 2-4 ft

Width: 2-3 ft

Sunlight: Full Sun/Part Shade

Soil Moisture: Medium/Moist

Tolerates: Drought/Deer

Bloom Period: Late Summer/Fall



Garden Uses:

- A vigorous, reliable summer bloomer for pollinator gardens

Ethnobotanical Note:

- The leaves of Spotted Beebalm (also called Horsemint) contain the oil thymol (which has antiseptic and vermifuge properties), and have a long tradition of **use in herbal medicine**

Pollinator Benefits:

- Flowers provide nectar and pollen to **butterflies, bees**, and a gorgeous and diverse array of solitary (non-aggressive) wasps
- Plants in the *Monarda* genus serve as **larval host plants** for 10 species of SC butterflies/moths, including Sphinx Moths

Pink Muhly Grass (*Muhlenbergia capillaris*)

Plant Type: Perennial Grass
Evergreen?: No
Height: 3 ft (when flowering)
Width: 3 ft

Sunlight: Full Sun/Part Sun
Soil Moisture: Medium/Dry
Tolerates: Deer/Wet Feet
Bloom Period: Early Fall



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Split-beard Bluestem (*Andropogon ternarius*)

Plant Type: Perennial Grass

Evergreen?: No

Height: 3-4 ft (in fall with seeds)

Width: 1-2 ft

Sunlight: Full Sun/Part Sun

Soil Moisture: Medium/Dry

Tolerates: Drought/Deer

Bloom Period: Fall



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Smooth Blue Aster (*Symphyotrichum laeve*)

Plant Type: Perennial Wildflower
Evergreen?: No
Height: 2-4 ft
Width: 1-3 ft

Sunlight: Full Sun/Part Shade
Soil Moisture: Medium/Dry
Tolerates: Drought
Bloom Period: Fall



Pollinator Benefits:

- Flowers provide nectar and pollen to **butterflies and bees** (including 10 species of SC specialist bees), and birds eat the seeds
- Plants in the *Symphyotrichum* genus serve as **larval host plants** for 80 species of SC butterflies/moths, including the Pearl Crescent

Showy Goldenrod (*Solidago speciosa*)

Plant Type: Perennial
Evergreen?: No
Height: 2-3 ft
Width: 2-3 ft

Sunlight: Full Sun
Soil Moisture: Medium/Dry
Tolerates: Deer/Drought
Bloom Period: Fall



Pollinator Benefits:

- Provides a generous fall supply of nectar and pollen for **diverse pollinators**, including **14 species of specialist bees**
- Plants in the genus *Solidago* serve as **larval host plants** for **89 species of SC butterflies/moths**

Heath Aster (*Symphyotrichum ericoides*)

Plant Type: Perennial

Evergreen?: Yes (basal rosette)

Height: 1-3 ft

Width: 1-2 ft

Sunlight: Full Sun

Soil Moisture: Medium/Dry

Tolerates: Drought/Deer

Bloom Period: Fall



Garden Uses:

- An excellent fall-blooming aster for informal pollinator gardens with full sun and well-drained soil

Pollinator Benefits:

- Flowers provide nectar and pollen to **butterflies and bees** (including 10 species of SC specialist bees), and birds eat the seeds
- Plants in the *Symphyotrichum* genus serve as **larval host plants** for 80 species of SC butterflies/moths, including the Pearl Crescent

Aromatic Aster (*Symphyotrichum oblongifolium*)

“Raydon’s Favorite”

Plant Type: Perennial Wildflower
Evergreen?: No
Height: 1-3 ft
Width: 2-3 ft

Sunlight: Full Sun/Part Sun
Soil Moisture: Medium/Dry
Tolerates: Deer/Drought
Bloom Period: Fall



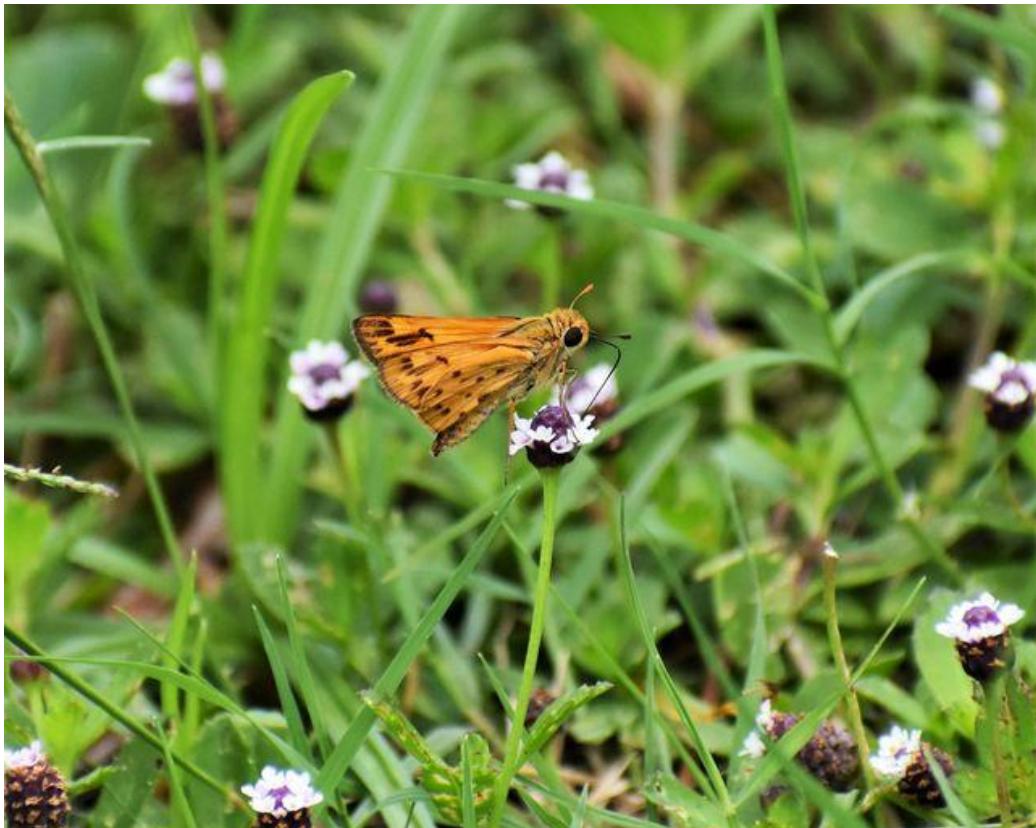
Pollinator Benefits:

- Flowers provide nectar and pollen to **butterflies and bees** (including 10 species of SC specialist bees), and birds eat the seeds
- Plants in the *Symphyotrichum* genus serve as **larval host plants** for 80 species of SC butterflies/moths, including the Pearl Crescent

Frogfruit (*Phyla nodiflora*)

Plant Type: Perennial Wildflower
Evergreen?: Yes
Height: 4-6"
Width: slowly spreading

Sunlight: Full Sun
Soil Moisture: Dry/Wet
Tolerates: Deer/Drought
Bloom Period: Summer/Fall



Garden Uses:

- Low evergreen groundcover that grows well in **sunny, well-drained areas with poor soils** (reduces competition with other plants)
- Grows well as a component of **sandy coastal lawns** such as James Island's Fort Johnson

Pollinator Benefits:

- The tiny Verbena family flowers are super-popular with **butterflies, bees, and beneficial wasps**
- **Larval host plant** for Common Buckeye, Phaon Crescent, and White Peacock butterflies

Common Yarrow (*Achillea millefolium*)

Plant Type: Perennial Wildflower
Evergreen?: Yes
Height: 1-3 ft
Width: 1-3 ft

Sunlight: Full/Partial Sun
Soil Moisture: Medium
Tolerates: Deer/Drought/Salt
Bloom Period: Summer



Garden Uses:

- May spread by seed and rhizomes
- **Appealing winter presence in mostly-dormant flower gardens;**
delicate-looking but sturdy evergreen foliage

Pollinator Benefits:

- Flowers provide nectar and pollen to **syrphid flies and bees**
(including 1 species of SC specialist bees)
- Plants in the *Achillea* genus serve as **larval host plants** for 11
species of SC butterflies/moths

General Layout of Native Plants within Garden



- West End: Pink Muhly Grass, Split-beard Bluestem Grass, Showy Goldenrod, and Smooth Blue Aster
- North Border: Frogfruit (no pine straw), Dense Blazing Star, Butterfly Milkweed, Blanket Flower
- East Border: Blue-eyed Grass, Lyreleaf Sage, Foxglove Beardtongue, Orange Coneflower
- South Border: Spotted Beebalm, Dune Sunflower, Wild Bergamot
- Middle Section: Turk's Cap Hibiscus, Black-eyed Susan, Scarlet Sage, Purple Coneflower, Heath Aster, Aromatic Aster, Common Yarrow

Short Term Maintenance Notes

- Watering: Water every 3-4 days for the first 3 weeks, then weekly for 3 weeks, then every other week for a month. Monitor in between watering for excessive wilting and provide supplemental watering after this time if it appears necessary for a subset of plants.
 - In general, it's best to water plants in the morning, so that any water that lands on the leaves has a chance to evaporate before evening. (Lingering water on leaves can lead to fungal diseases such as powdery mildew.)
 - To the extent possible, water at soil level around the base of the plant, rather than pouring water on the plant.
 - It is better to water less frequently and more deeply than the other way around. Deep watering trains roots to extend to a range of depths (rather than just near the surface) and helps plants become more resilient to dry spells after human watering ceases.
- Weeding: Monthly weeding parties should be sufficient, since a thick layer of pine straw will be applied each spring to control weed seed germination.
- Pruning: Prune back any damaged plants at the first node below the damage. Also prune Dune Sunflower as needed (will be needed more later in the season) if it starts growing over smaller plants. Prune about 1 cm above a node (where a side stem comes out of the main stem) to keep it healthy. Dune Sunflower responds well to being contained in size via monthly pruning. Hand pruning shears or sharp kitchen scissors both work well for this purpose.

Post-First-Frost Maintenance Notes

- Unsightly frost-killed foliage can be pruned back **BUT** do so as moderately as feasible (since even frost-killed foliage provides value to wildlife in the form of shelter in the winter months, and grass and flower seedheads provide food for migrating and overwintering songbirds).
 - Retain frost-killed native grasses and seed heads for as long into the winter season as is feasible. These are often attractive and provide winter structure in the garden.
- If the pine straw mulch is looking thin in spots, supplement it to a 3" depth to maintain a robust barrier to winter weed seed germination. (There is no need to remove old pine straw; that will decompose usefully. Just add additional pine straw on top of the existing material.)
 - Be careful not to bury basal rosettes of “keeper” plants!
 - Exceptions to the 3” rule: Around Frogfruit + if you’d like to try naturally propagating native plants (especially annuals – see final page) within the garden by seed, create discrete gaps in the pine straw about 6” wide and place a label in each gap with the name of the plant you plan to propagate there. Then collect seed heads from plants within the garden and crumble them to sprinkle seeds on the soil surface. Sprinkle a VERY thin (1/8”) layer of soil atop the seeds.
- Continue weeding monthly throughout the winter. Our winters are mild enough that there’s a whole set of weedy plant species that specifically germinate and grow during the winter months.

Early Spring Maintenance Notes

- Weed the garden. Note: It's especially important at this time of year to have a knowledgeable person on site to train weeders which plants are "keepers", and which are weeds!
- Cut the native grasses back to 12" above the ground, ideally just as they start greening up from the base in spring.
- Prune back any winter-damaged native flower foliage.
- Re-establish boundaries for plant species that spread by underground runners (see table on next page). Dig up any extra plants that have spread beyond their boundaries. This is a great opportunity for garden volunteers to be rewarded with the chance to bring free plants home for themselves or friends!
- Top up pine straw to a 3"-thick layer (except around Frogfruit, which requires open soil to grow). Be careful not to bury small native plants.
- Assess whether self-seeding of native annual plants (see spreadsheet) has occurred, and if so transplant them to desired locations within the garden. If self-seeding HAS occurred, transplant the baby plants to desired locations within the garden.
- If self-seeding of native annual plants did NOT occur, purchase and plant replacement annual plants.

SELECTED CHARACTERISTICS OF GARDEN PLANTS

| Common Name | Type | Spreader? |
|----------------------|-----------|-------------------|
| Black-eyed Susan | Annual | By seed |
| Blanket Flower | Annual | By seed |
| Dune Sunflower | Annual | By seed |
| Scarlet Sage | Annual | By seed |
| Lance-leaf Coreopsis | Perennial | By seed |
| Lyre-leaf Sage | Perennial | By seed |
| Turk's Cap Hibiscus | Perennial | By seed |
| Purple Coneflower | Perennial | By seed |
| Orange Coneflower | Perennial | By seed |
| Blue-eyed Grass | Perennial | Vegetative (slow) |
| Foxglove Beardtongue | Perennial | Vegetative (slow) |
| Frogfruit | Perennial | Vegetative (mod.) |
| Smooth Blue Aster | Perennial | Rhizomes (mod.) |
| Common Yarrow | Perennial | Rhizomes (mod.) |
| Wild Bergamot | Perennial | Rhizomes (fast) |
| Spotted Beebalm | Perennial | Rhizomes (fast) |
| Dense Blazing Star | Perennial | |
| Butterfly Milkweed | Perennial | |
| Pink Muhly Grass | Perennial | |
| Split-beard Bluestem | Perennial | |
| Showy Goldenrod | Perennial | |
| Heath Aster | Perennial | |
| Aromatic Aster | Perennial | |

residential landscape designs. The two possible locations for the demonstration garden that have been discussed are the triangle lot off 7th Avenue and Palm Boulevard and the Carmen R. Bunch Park. The demonstration garden will likely be implemented on a pilot basis for one to two years. The reception by the community and practicality of maintenance will determine the longevity of the demonstration garden.

Next Steps

The next steps in the planning process are as follows:

1. The first “Gardening with Native Plants” Seminar to be held on January 16th at the IOP Recreation Center
2. Obtain permission for the demonstration garden from IOP Water and Sewer Commission
3. Complete site preparation in late February to early March
4. Begin planting in mid to late March
5. Determine who will perform upkeep and maintenance for the garden as needed
6. Decide what will happen at the conclusion of the pilot program

City of Isle of Palms Native Plant Demonstration/Pollinator Garden @ Palm Blvd and 7th Ave
Pricing Estimate for Native Plants and Supplies
Prepared by Sharleen Johnson of Native Plants to the People LLC (1/10/24)

NATIVE PLANTS

| Common Name | Type | Pot Size | \$/pot | Qty | Subtotal |
|--|-----------|----------|--------|-----|------------------------------|
| Black-eyed Susan | Annual | plug | \$3 | 3 | \$9.00 |
| Blanket Flower | Annual | 3.5" | \$6 | 6 | \$36.00 |
| Dune Sunflower | Annual | 5.5" | \$9 | 2 | \$18.00 |
| Scarlet Sage | Annual | plug | \$3 | 3 | \$9.00 |
| Lance-leaf Coreopsis | Perennial | plug | \$3 | 3 | \$9.00 |
| Lyre-leaf Sage | Perennial | 3.5" | \$6 | 3 | \$18.00 |
| Turk's Cap Hibiscus | Perennial | 1-gal. | \$11 | 1 | \$11.00 |
| Purple Coneflower | Perennial | plug | \$3 | 3 | \$9.00 |
| Orange Coneflower | Perennial | 3.5" | \$6 | 3 | \$18.00 |
| Blue-eyed Grass | Perennial | 3.5" | \$6 | 3 | \$18.00 |
| Foxglove Beardtongue | Perennial | plug | \$3 | 3 | \$9.00 |
| Frogfruit | Perennial | 3.5" | \$6 | 3 | \$18.00 |
| Smooth Blue Aster | Perennial | plug | \$3 | 3 | \$9.00 |
| Common Yarrow | Perennial | plug | \$3 | 3 | \$9.00 |
| Wild Bergamot | Perennial | plug | \$3 | 3 | \$9.00 |
| Spotted Beebalm | Perennial | plug | \$3 | 5 | \$15.00 |
| Dense Blazing Star | Perennial | 5.5" | \$9 | 2 | \$18.00 |
| Butterfly Milkweed | Perennial | plug | \$3 | 5 | \$15.00 |
| Pink Muhly Grass | Perennial | 1-gal. | \$9 | 3 | \$27.00 |
| Split-beard Bluestem | Perennial | plug | \$3 | 5 | \$15.00 |
| Showy Goldenrod | Perennial | plug | \$3 | 3 | \$9.00 |
| Heath Aster | Perennial | 3.5" | \$6 | 2 | \$12.00 |
| Aromatic Aster | Perennial | 3.5" | \$6 | 2 | \$12.00 |
| | | | | | \$332.00 Subtotal |
| <u>Please note:</u> Sizes/availability may vary modestly at planting time. | | | | | \$29.88 Sales tax (9%) |
| | | | | | \$361.88 Plants total |

SUPPLIES

| Product | Unit | \$/unit | Qty | Subtotal |
|--|-------------------|---------|-----|--------------------------------|
| Black Kow Compost | 1 ft ³ | \$6.50 | 12 | \$78.00 |
| Pine Straw | Bale | \$6.00 | 12 | \$72.00 |
| Suncast 5.3" dig-in black resin Edging | 60 ft | \$35.00 | 1 | \$35.00 |
| Suncast 5.3" dig-in black resin Edging | 40 ft | \$24.00 | 1 | \$24.00 |
| Shopping Time | Per hr | \$30.00 | 1.5 | \$45.00 |
| | | | | >-- Exempt from sales tax |
| | | | | \$254.00 Subtotal |
| | | | | \$18.81 Sales tax (9%) |
| | | | | \$272.81 Supplies total |

Water Action Plan:

| Activity | Status |
|--|---|
| Maps – drainage, sewers, septic systems | Completed |
| Identify storm run-off outfalls | Completed – 18 outfalls identified excl. Wild Dunes |
| Identify septic system clusters | Completed |
| Define sample locations | Completed – 9 total, only 5 for PFAS |
| Collect and analyze stormwater samples | |
| Obtain lab results | |
| Obtain PFAS results from IOP W&S for wastewater, drinking water, & biosolids | |
| Evaluate results to determine if and any specific areas / issues of concern | |
| Summarize results and recommend next steps | |

Sampling Proposal:

- Retain GEL to collect one (1) grab sample from 50% of the stormwater outfalls during the first hour of a rain event.
- Analyze each sample for the parameters listed in the table below.
- Only analyze up to five (5) stormwater outfall samples for PFAs.
- Prioritize sample locations to dense septic and commercial areas.

| Parameter | Method | Lab | \$ / sample | Quantity | Total, \$ |
|--|---------------------------------|---------|-------------|----------|----------------|
| Total Coliforms | Standard Methods | Trident | 55 | 9 | 495 |
| Fecal Coliforms | Standard Methods | Trident | 55 | 9 | 495 |
| Total Nitrogen | US EPA 351.2/353.2/ Calculation | GEL | 75 | 9 | 675 |
| Total Phosphorus | US EPA 365.4 | GEL | 35 | 9 | 315 |
| Oil & Grease | US EPA 1664B | GEL | 75 | 9 | 675 |
| pH | Field` | GEL | 6 | 9 | 45 |
| Total Suspended Solids | SM 2540 D | GEL | 15 | 9 | 135 |
| PFAS | US EPA Draft 1633 Rev. 1 | GEL | 450 | 5 | 2,250 |
| Analytical Fees | | | | | \$5,085 |
| Environmental Waste Fee (7% of analytical fees) | | | | | \$356 |
| Sample Collection by GEL* | | | | | \$1,550 |
| Total | | | | | \$6,991 |

*Sample collection estimate for 13 samples. This may be less for only 9 locations.