USDA Natural Resources Conservation Service
U.S. DEPARTMENT OF AGRICULTURE

Georgia Power

Woodard & Curran

Implementing Pollinator Habitat in Utility Rights-of-Way

Intended for use in Georgia and the Southeast region

Introduction

More than 40% of global pollinator species may be at risk of extinction according to an assessment conducted by the United Nations (IPBES, 2016). Some of the major factors in the decline of pollinator populations are habitat degradation, pesticides, and disease. Migratory pollinator species such as Monarch butterfly *(Danaus plexippus)*, and gulf fritillary *(Agraulis vanillae)* rely on ecological corridors with flowering plants along their migratory route and local pollinator species utilize these habitats for foraging and nesting. Utility rights-of-way (ROWs) provide an excellent opportunity for wildflowers to flourish and support native pollinator habitat. Common examples of utility ROWs include power lines, oil and gas pipelines, water and sewer lines, and telecommunications cable lines.

ROWs, because of their regularly managed vegetation, provide open, sunny habitat that encourages herbaceous plants and grassland-like ecosystems to establish. ROWs are co-managed by landowners and utility operators and offer unique opportunities for providing habitat suitable to vulnerable pollinators and other wildlife species. Species of native pollinators and flowering plants have co-evolved to uniquely benefit one another. Native plants are also adapted to local climate and soils, promote biodiversity in the ecosystem, and fill the ecological niche of endemic species. Non-native or invasive plants can introduce pathogens or pests that may ultimately harm pollinators. This document offers considerations for landowners and ROW easement managers in developing pollinator habitat plantings within managed ROWs and includes lists of native plant nurseries, native plants commonly found in nurseries, and additional educational resources.


Photo by Samantha Castro

Developing a Pollinator Habitat Plan for Right-of-Ways

Site Assessment

- Assess the site for soil condition, soil moisture, slope, aspect, sunlight exposure, invasive species, and land use. These conditions will inform your plant selection, site preparation needs, method of planting, and management planning.
- Areas established with invasive species such as common turf grasses will require additional site preparation. Prioritize enhancing other manageable areas, if possible.
- Consider the objectives of your project such as erosion control, increased plant diversity, and creating habitat for specific wildlife/pollinator species. These should inform your species list, plant type (i.e. seed vs. transplant), and any additional design elements you may need to include for a successful project.
- Confirm potential planting areas are outside of maintained safety zones and ensure adherence to utility ROW encroachment rules. A minimum undisturbed area within a 25-foot radius of any structure and/or attachment locations should be maintained. Coordination with transmission ROW managers is encouraged before proceeding with plantings. For additional information on acceptable use versus encroachment in Georgia Power ROWs please visit: www.georgiapower.com/community/environment/trees-and-right-of-way/easements-and-restrictions.html

Developing a Plant List

- NRCS recommends including at least ten different species in a native pollinator planting. Species selection should include at least three species that bloom during each growing season, and include at least one legume, one bunchgrass species, and one warm season grass species for optimal habitat conditions.
- Determine which pollinators you want to create or enhance habitat for and what plants will be best suited to create a diverse stand of foraging opportunities throughout the year.
- Remember that these plants will also provide cover and nesting habitat for other wildlife as well.
- Select plants or seed of the same ecotype as your planting site (e.g. Piedmont; Coastal Plain) and refrain from using cultivars in plantings.
- Woody plant species with a height greater than 15 feet or that have a colonizing habit are not compatible with regular ROW maintenance.

Site Preparation

- The method of site preparation required will depend on the existing conditions of the site. Methods may include invasive species treatment and removal, clearing, and tilling. Fertilizers are often not necessary for native species.
- Method and length of invasive plant management will depend on the targeted invasive species and aggressiveness of the population. Xerces Society provides additional resources on sustainable pest management on their website (Xerces, 2024).
- Develop a schedule for your project, incorporating site preparation and planting activities to allow sufficient time for planting success.

Planting

- The method of planting may vary depending on site conditions and whether you are planting seed mixes or transplants.
- A primary method of seed mix planting includes broadcast seeding, either through manual dispersal or broadcasting using a seed spreader. Additionally, select an appropriate seeding rate for your seed mix. If ordering a native seed mix, the seed supplier should be able to provide recommended seeding rates for pre-made and custom seed mixes.
- When planting with transplants, incorporate plant spacing and height at maturity specifications into the planting design.

Management

- The planting area should be maintained and kept clean of any undesirable vegetation. Woody species that may exceed 15 feet at maturity, such as pine, oak, sweetgum, etc. should be addressed as necessary. This will reduce the need for vegetation-related maintenance within the planting areas by utility vegetation crews.
- Add signage to alert ROW management crews and neighbors of sensitive planting areas.
- Consider deer-resistant plant species or methods of exclusions to prevent herbivory on young plants.
- Monitor planted areas for invasive species or unwanted weeds and address early on.
- Mowing an established pollinator habitat should be done no more than once per year and should occur during the dormant season. Mow species no lower than 6 inches and refrain from mowing during peak blooming periods.

References

Electric Power Research Institute (EPRI). 2019. Conservation Actions for Electric Power Companies to Support Monarch Butterflies. 3002015435. xerces.org/publications/planning-management/conservation-actions-for-electric-power-companies-to-support

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Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). 2016. Summary for policymakers of the assessment report of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services on pollinators, pollination and food production. Zenodo. doi.org/10.5281/zenodo.2616458

Xerces Society. 2024. Rethinking Weed Management at Home [Guide]. www.xerces.org/publications/fact-sheets/protecting-pollinators-from-herbicides

Native Plant Nurseries and Additional Resources

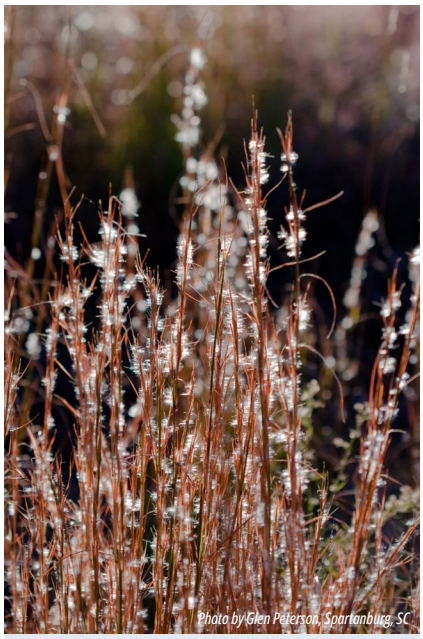
Georgia SE Region Native Plant Nurseries

Supplier	Supplier Locations
Coastal Wildscapes	South Georgia
Beech Hollow Wildflower Farm	North Georgia
Ernst Conservation Seeds	Pennsylvania
Flat Creek Natives	Central Georgia
Georgia Native Plant Society	Throughout Georgia (local chapter sales)
Native Forest Nursery	Tennessee
North Georgia Native Nursery	North Georgia
Roundstone Native Seed	Kentucky
Superior Trees	North Florida
UGA Botanical Garden	North Georgia

Additional Resources

- Georgia Native Plant Society Home – GNPS
- Homegrown National Park
- Monarchs Across Georgia
- NCSU Extension Gardener Plant Toolbox
- NRCS Georgia Pollinator Habitat Job Sheet
- Rights-of-Way as Habitat Working Group
- University of Georgia Connect to Protect
- Xerces Society

GRASSES



Botanical Name:
Andropogon virginicus
Common Name:
Broomsedge
Light Requirements:
Full sun to partial shade
Soil Requirements:
Moist to dry
Mature Height: 2–4 feet
Mature Width: 1–2 feet
Blooming: Fall
Region: Entire state

Botanical Name:
Chasmanthium sessiliflorum
Common Name:
Longleaf wood oats
Light Requirements:
Partial shade
Soil Requirements:
Occasionally wet to well-drained
Mature Height: 2–5 feet
Mature Width: 1–3 feet
Blooming: Summer, Fall
Region: Entire state

Botanical Name:
Elymus virginicus
Common Name:
Virginia wild-rye
Light Requirements:
Full sun to partial shade
Soil Requirements:
Well-drained
Mature Height: 1–3 feet
Mature Width: 1–2 feet
Blooming: Summer, Fall
Region: Entire state

Full sun: 6+ hours of direct sun **Dappled sun:** 6+ hours of indirect sun **Partial shade:** 4–6 hours of direct sun **Deep shade:** 2 or less hours of direct sun

Botanical Name: *Chasmanthium latifolium*
Common Name: River oats
Light Requirements: Partial shade
Soil Requirements: Occasionally wet to moist
Mature Height: 2–5 feet
Mature Width: 1–3 feet
Blooming: Summer, Fall
Region: Entire state

Botanical Name: *Dichanthelium clandestinum*
Common Name: Deertongue
Light Requirements: Full sun to deep shade
Soil Requirements: Moist to occasionally dry
Mature Height: 2–5 feet
Mature Width: 2–3 feet
Blooming: Spring, Summer, Fall
Region: Entire state

Botanical Name: *Schizachyrium scoparium*
Common Name: Little bluestem
Light Requirements: Full sun
Soil Requirements: Moist to well-drained
Mature Height: 2–4 feet
Mature Width: 2–3 feet
Blooming: Summer, Fall
Region: Entire state

Botanical Name: *Sorghastrum nutans*
Common Name: Indiangrass
Light Requirements: Full sun
Soil Requirements: Moist to well-drained
Mature Height: 5–7 feet
Mature Width: 1–2 feet
Blooming: Summer, Fall
Region: Entire state

Full sun: 6+ hours of direct sun **Dappled sun:** 6+ hours of indirect sun **Partial shade:** 4–6 hours of direct sun **Deep shade:** 2 or less hours of direct sun

Botanical Name: *Chrysogonum virginianum*
Common Name: Green and gold
Light Requirements: Partial shade to deep share
Soil Requirements: Moist to occasionally dry
Mature Height: <1 foot
Mature Width: 1–2 feet
Blooming: Spring
Region: Entire state

Botanical Name: *Conoclinium coelestinum*
Common Name: Blue mistflower
Light Requirements: Full sun to partial shade
Soil Requirements: Occasionally flooded to moist
Mature Height: 1–3 feet
Mature Width: 1–2 feet
Blooming: Summer, Fall
Region: Entire state

Botanical Name: *Echinacea purpurea*
Common Name: Eastern purple coneflower
Light Requirements: Full sun to partial shade
Soil Requirements: Moist to occasionally dry
Mature Height: 3–4 feet
Mature Width: 1–2 feet
Blooming: Spring, Summer, Fall
Region: Piedmont, Coastal Plain

Botanical Name: *Eutrochium fistulosum*
Common Name: Joe pye weed
Light Requirements: Full sun to partial shade
Soil Requirements: Occasionally wet to moist
Mature Height: 4–8 feet
Mature Width: 2–4 feet
Blooming: Summer, Fall
Region: Entire state

Full sun: 6+ hours of direct sun **Dappled sun:** 6+ hours of indirect sun **Partial shade:** 4–6 hours of direct sun **Deep shade:** 2 or less hours of direct sun

HERBACEOUS PERENNIALS

Botanical Name:
Asclepias tuberosa
Common Name:
Butterfly milkweed
Light Requirements:
Full sun to partial shade
Soil Requirements: Well-drained to occasionally dry
Mature Height: 1–2 feet
Mature Width: 1–2 feet
Blooming: Spring, Summer
Region: Entire state

Botanical Name:
Lobelia cardinalis
Common Name:
Cardinal flower
Light Requirements:
Full sun to partial shade
Soil Requirements:
Occasionally wet to moist
Mature Height: 4–5 feet
Mature Width: 1–2 feet
Blooming: Summer
Region: Entire state

Botanical Name:
Monarda punctata
Common Name:
Dotted beebalm
Light Requirements:
Full sun
Soil Requirements: Well-drained to occasionally dry
Mature Height: 3–4 feet
Mature Width: 2–3 feet
Blooming: Summer, Fall
Region: Entire state

Botanical Name: *Helianthus angustifolius*
Common Name: Narrowleaf sunflower
Light Requirements: Full sun to partial shade
Soil Requirements: Occasionally wet to moist
Mature Height: 5–8 feet
Mature Width: 2–4 feet
Blooming: Summer, Fall
Region: Entire state

Full sun: 6+ hours of direct sun **Dappled sun:** 6+ hours of indirect sun **Partial shade:** 4–6 hours of direct sun **Deep shade:** 2 or less hours of direct sun

Botanical Name: *Pycnanthemum tenuifolium*
Common Name: Slender mountain-mint
Light Requirements: Full sun to partial shade
Soil Requirements: Occasionally wet to dry
Mature Height: 2–4 feet
Mature Width: 2–3 feet
Blooming: Summer, Fall
Region: Entire state

Botanical Name: *Oenothera fruticosa*
Common Name: Southern sundrops
Light Requirements: Full sun to partial shade
Soil Requirements: Moist to occasionally dry
Mature Height: 1–2 feet
Mature Width: 1–3 feet
Blooming: Spring, Summer
Region: Entire state

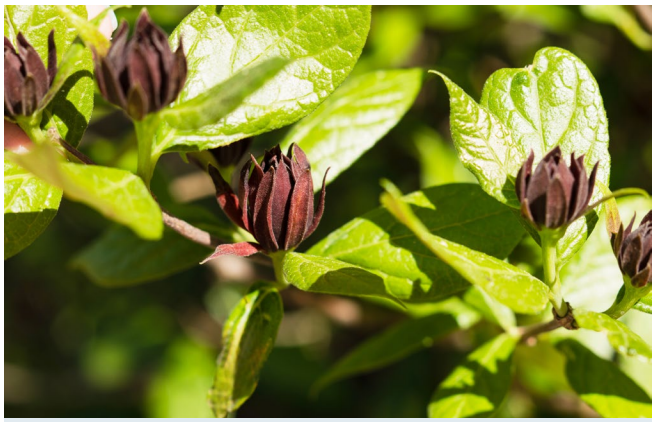
Botanical Name: *Salvia lyrata*
Common Name: Lyreleaf sage
Light Requirements: Full sun to deep shade
Soil Requirements: Moist to dry
Mature Height: 1–2 feet
Mature Width: 1 foot
Blooming: Spring
Region: Entire state

Botanical Name: *Symphiotrichum lateriflorum*
Common Name: Calico aster
Light Requirements: Full sun to partial shade
Soil Requirements: Moist to dry
Mature Height: 2–3 feet
Mature Width: 2–3 feet
Blooming: Fall
Region: Entire state

Full sun: 6+ hours of direct sun **Dappled sun:** 6+ hours of indirect sun **Partial shade:** 4–6 hours of direct sun **Deep shade:** 2 or less hours of direct sun

Botanical Name: *Aronia arbutifolia*
Common Name: Red chokeberry
Light Requirements: Full sun to partial shade
Soil Requirements: Occasionally wet to dry
Mature Height: 6–12 feet
Mature Width: 3–5 feet
Blooming: Spring
Region: Entire state

Botanical Name: *Callicarpa americana*
Common Name: American beautyberry
Light Requirements: Full sun to partial shade
Soil Requirements: Moist to well-drained
Mature Height: 3–8 feet
Mature Width: 3–6 feet
Blooming: Summer
Region: Entire state



Botanical Name: *Calycanthus floridus*
Common Name: Common sweetshrub
Light Requirements: Full sun to deep shade
Soil Requirements: Moist to well-drained
Mature Height: 6–12 feet
Mature Width: 6–12 feet
Blooming: Spring
Region: Entire state

Botanical Name: *Ceanothus americanus*
Common Name: New Jersey tea
Light Requirements: Full sun to partial shade
Soil Requirements: Well-drained
Mature Height: 2–3 feet
Mature Width: 3–5 feet
Blooming: Spring
Region: Entire state

Full sun: 6+ hours of direct sun **Dappled sun:** 6+ hours of indirect sun **Partial shade:** 4–6 hours of direct sun **Deep shade:** 2 or less hours of direct sun

Botanical Name: *Cephalanthus occidentalis*
Common Name: Buttonbush
Light Requirements: Full sun to deep shade
Soil Requirements: Occasionally wet to occasionally dry
Mature Height: 5–8 feet
Mature Width: 3–6 feet
Blooming: Summer
Region: Entire state

Botanical Name: *Leucothoe axillaris*
Common Name: Coastal doghobble
Light Requirements: Partial shade to dappled sunlight
Soil Requirements: Occasionally wet to moist
Mature Height: 3–4 feet
Mature Width: 4–6 feet
Blooming: Spring
Region: Piedmont, Coastal Plain

Botanical Name: *Itea virginica*
Common Name: Virgina sweetspire
Light Requirements: Partial shade
Soil Requirements: Moist to well-drained
Mature Height: 4–8 feet
Mature Width: 3–6 feet
Blooming: Spring, Summer
Region: Entire state

Botanical Name: *Corylus americana*
Common Name: American hazelnut
Light Requirements: Full sun to deep shade
Soil Requirements: Moist to occasionally dry
Mature Height: 9–12 feet
Mature Width: 8–13 feet
Blooming: Spring
Region: Entire state

Full sun: 6+ hours of direct sun **Dappled sun:** 6+ hours of indirect sun **Partial shade:** 4–6 hours of direct sun **Deep shade:** 2 or less hours of direct sun

Botanical Name: *Physocarpus opulifolius*
Common Name: Common ninebark
Light Requirements: Full sun
Soil Requirements: Occasionally flooded to moist
Mature Height: 5–8 feet
Mature Width: 6–10 feet
Blooming: Spring, Summer
Region: Entire state

Botanical Name: *Rhododendron canescens*
Common Name: Piedmont azalea
Light Requirements: Full sun to partial sun
Soil Requirements: Moist to well-drained
Mature Height: 6–15 feet
Mature Width: 6–10 feet
Blooming: Spring
Region: Entire state

Botanical Name: *Vaccinium elliotti*
Common Name: Elliott's blueberry
Light Requirements: Full sun to partial shade
Soil Requirements: Moist to well-drained
Mature Height: 4–6 feet
Mature Width: 4–6 feet
Blooming: Spring
Region: Piedmont, Coastal Plain

Botanical Name: *Viburnum dentatum*
Common Name: Arrowwood viburnum
Light Requirements: Full sun to partial shade
Soil Requirements: Moist to well-drained
Mature Height: 5–10 feet
Mature Width: 5–10 feet
Blooming: Spring
Region: Mountains, Piedmont

Full sun: 6+ hours of direct sun **Dappled sun:** 6+ hours of indirect sun **Partial shade:** 4–6 hours of direct sun **Deep shade:** 2 or less hours of direct sun