



**SEABROOK OPEN SPACE AND TRAILS COMMITTEE
NOTICE OF MEETING
THURSDAY, APRIL 4, 2024 - 5:00 PM**

For city information visit www.seabrooktx.gov
For Agenda Center visit www.seabrooktx.gov/agendacenter

NOTICE IS HEREBY GIVEN THAT THE SEABROOK OPEN SPACE AND TRAILS COMMITTEE WILL MEET ON **THURSDAY APRIL 4, 2024 AT 5:00 PM** AT SEABROOK PUBLIC WORKS AND ANIMAL CONTROL COMPLEX TRAINING ROOM, 1100 RED BLUFF ROAD, SEABROOK, TEXAS, TO DISCUSS, CONSIDER, AND IF APPROPRIATE, TAKE ACTION WITH RESPECT TO THE ITEMS LISTED BELOW. **ALTHOUGH THIS IS NOT A SEABROOK CITY COUNCIL MEETING, MEMBERS OF THIS BODY MAY ATTEND AND A QUORUM OF THIS BODY MAY BE PRESENT.**

1. PUBLIC COMMENTS AND ANNOUNCEMENTS

At this time the Commission will listen to any member of the audience on any subject matter whether or not that item is on the agenda. All comments are limited to a maximum of four minutes for each speaker. In accordance with the Open Meetings Act, Commission Members may not discuss or take action on any item that has not been posted on the agenda. When your name is called, please state your name and address clearly before making your comments. Thank you.

2. PRESENTATION

2.1 Eagle Scout Project to Build Bat Boxes in Park - *Aiden Pierson, Eagle Scout*

2.2 Training and Compliance - *Rachel Lewis, City Secretary*

3. CONSENT AGENDA

3.1 Approve the minutes of the March 7, 2024 Open Space and Trails Committee meeting - *Amanda Morales, Deputy City Secretary*

4. NEW BUSINESS

4.1 Discuss recently viewed Keep Texas Beautiful webinars and take all appropriate action on remaining required webinar hours - *Committee*

4.2 Consider and take all appropriate action on proposed Eagle Scout project to build bat boxes for the park - *Committee*

4.3 Update and report on various Seabrook Park items, including needed repairs, signage, plants, flowers, and vegetation, and park use matters - *Committee*

4.4 Update and report on various Seabrook Park items, including community events, grant administration, repairs, Council approvals and determinations and emergency events - *Chair Comeaux*

4.5 Discuss updates on Carothers Community Garden and plantings - *Committee*

5. ROUTINE BUSINESS

5.1 Report from the Committee Chair on the status of a list of proposed actions taken by the Open Space and Trails Committee and forwarded to City Council for its action or review - *Chair Comeaux*

5.2 Update on volunteer hours - *Committee*

5.3 Establish future meeting dates and agenda items - *Committee*

THE OPEN SPACE AND TRAILS COMMITTEE RESERVES THE RIGHT TO HEAR ANY OF THE ABOVE DESCRIBED AGENDA ITEMS THAT QUALIFY FOR AN EXECUTIVE SESSION IN AN EXECUTIVE SESSION BY PUBLICLY ANNOUNCING THE APPLICABLE SECTION NUMBER OF THE OPEN MEETINGS ACT, (CHAPTER 551 OF THE TEXAS GOVERNMENT CODE, AND VERNON'S TEXAS CODES ANNOTATED, IN ACCORDANCE WITH THE AUTHORITY CONTAINED IN ONE OR MORE OF THE FOLLOWING SECTIONS: SECTION 551.071, CONSULTATION WITH ATTORNEY; SECTION 551.072, REAL PROPERTY; SECTION 551.073, DELIBERATION REGARDING A PROSPECTIVE GIFT; SECTION 551.074, PERSONNEL MATTERS; SECTION 551.076, SECURITY DEVICES; AND SECTION 551.087, ECONOMIC DEVELOPMENT) THAT JUSTIFIES EXECUTIVE SESSION TREATMENT.

THIS FACILITY IS WHEELCHAIR ACCESSIBLE AND ACCESSIBLE PARKING SPACES ARE AVAILABLE. REQUESTS FOR OTHER ACCOMMODATIONS OR INTERPRETIVE SERVICES, MUST BE MADE, 48 HOURS PRIOR TO THIS MEETING. PLEASE CONTACT THE CITY SECRETARY'S OFFICE AT (281) 291-5663 OR CITYSEC@SEABROOKTX.GOV FOR FURTHER INFORMATION.

I certify that this notice was posted on the bulletin board on or before Monday, April 1, 2024 no later than 5:00 p.m. and that this notice will remain posted until the meeting has ended.

Amanda Morales,
Deputy City Secretary



**MEETING MINUTES
MARCH 7, 2024**

**OPEN SPACE & TRAILS
MEETING MINUTES**

Chair Monica Comeux called the Open Space and Trails meeting to order at 5:01 p.m. in the Meeting Room of the Public Works Building. Present were Committee Members David Popken, Sally Antrobus, Debra Harper, John Coggeshall, Nehemiah Jackson, and Jesse Jones. Chair Comeux declared a quorum. Also in attendance were City Secretary Rachel Lewis, Deputy City Secretary Amanda Morales, City Manager Gayle Cook, Deputy City Manager Sean Landis, Public Works Director Kevin Padgett, Assistant Public Works Director Brian Craig, and Director of Finance Michael Gibbs.

1. Public Comments and Announcements

There were no public comments.

2. Consent Agenda

2.1 Approve the minutes of the February 1, 2024, Open Space and Trails Committee meeting.

Motion:	To approve the Consent Agenda
Made By:	Committee Member Jones
Seconded By:	Committee Member Popken
Vote:	Motion carried unanimously by all present (Members Antrobus and Jackson were not present for this vote)

3. ADJOURN REGULAR SESSION AND ENTER INTO WORKSHOP SESSION AT 5:03 P.M.

3.1 Consider, discuss and take all appropriate action regarding City's Purchasing Policy in relation to City's Capital Improvement Program (CIP) for certain Park Projects:

- The committee discussed updates to the engineering plan for upgrades to the trails.
- P20 CAROTHERS GARDEN EAST TRACT TRAIL SYSTEM - FUND 41 \$230,000.00

3.2 Discussion on establishing a grading and drainage scope in conjunction with City's contract engineer, Norex Engineering, for a recommendation to City Council on the CIP Project P20 - Carothers Coastal Garden East Tract

- The committee discussed updates to the engineering plan for grading and drainage.

4. ADJOURN WORKSHOP SESSION AND ENTER INTO REGULAR SESSION AT 6:25 P.M.



**MEETING MINUTES
MARCH 7, 2024**

**OPEN SPACE & TRAILS
MEETING MINUTES**

6. Old Business – Chair Comeaux moved this item to an earlier time in the meeting

6.1 Consider and take all appropriate action on a recommendation for a grading and drainage scope to recommend to City Council with the City's CIP Project P20 - Carothers Coastal Gardens East Tract.

- Committee discussed changes they wanted Norex to make to the engineering plan. Upon completion of these changes, they are to be returned to OST for review before submitting to Council.

5. New Business

5.1 Consider and take all appropriate action on moving meeting time to 4:00 p.m. - *Committee*

Motion:	Motion to postpone indefinitely
Made By:	Committee Member Popken
Seconded By:	Committee Member Jones
Vote:	Motion carried unanimously by majority vote. Member Antrobus abstained.

6. Routine Business

7.1 Report from City Staff on the status of a list of actions taken by the Open Space and Trails Committee and forwarded to City Council for its action or review.

7.2 Update Volunteer Hours.

- The Committee updated the Volunteer Hour Log.

7.3 Establish future meeting dates and agenda items.

- Add items from previous Routine Business agendas back to Routine Business section.
- Next OST Meeting will be April 4, 2024.



MEETING MINUTES
MARCH 7, 2024

OPEN SPACE & TRAILS
MEETING MINUTES

Motion: To adjourn
Made By: Committee Member Jones
Seconded By: Committee Member Harper
Vote: **Motion carried** unanimously by all present.

The meeting was adjourned at 6:59 p.m.

APPROVED: _____
Monica Comeux, Chair

DATE: _____

ATTEST: _____
Amanda Morales, Deputy City Secretary



Agenda Briefing

Date of Meeting: April 4, 2024

Responsible Department: City Secretary's Office

Presenter:

Briefing Prepared By:

Strategic Focus Area:

General Information:

Discuss recently viewed Keep Texas Beautiful webinars and take all appropriate action on remaining required webinar hours - *Committee*

Executive Summary / Background:

Funding / Fiscal Information:

Supporting Materials Attached: None

Prior Action / Review by Council, Boards, Commissions:

Staff Recommendation:



THE BAYOU PLANTING GUIDE

BAYOU PRESERVATION ASSOCIATION MISSION:

Protect and restore the richness and diversity of our waterways through activism, advocacy, collaboration and education.

THIS GUIDE BELONGS TO

NAME _____

ADDRESS _____

DATE _____

THANK
YOU!

ACKNOWLEDGMENTS

The Bayou Preservation Association (BPA) is grateful to the following individuals, organizations and companies for contributing to the creation and update of this publication.

Concept, Text, Editing & Production

Author, Mark Bowen

Judy Boyce, Ralph De Leon,
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The Chickadee Nature Store,
The Houston Advanced Research Center,
The Houston Arboretum and Nature Center,
The Lady Bird Johnson Wildflower Center,
Treeseach Farms and photographers
Lucy Barrow, Georgia Carter, Ralph De Leon,
Martha Henschen, Robert Rayburn,
Eric Ruckstuhl and Heidi Sheesley

FOREWORD

by Terry Hershey



Terry Hershey co-founder of the Bayou Preservation Association, board member of the Association of Floodplain Managers Foundation and the National Recreation Foundation, and former Commissioner of the Texas Parks and Wildlife Commission

Hats off to the Garden Club of Houston for providing a grant to Bayou Preservation Association for this edition of the Bayou Planting Guide. A special thank you to Texas Forest Service for underwriting and to Bayou Preservation Association for sponsoring the first bayou planting guide. The guide is created for citizens who own land along one of the bayous, for those who have detention swales, diversion swales, rain gardens and/or ponds on their properties and for agencies who have some responsibility for bayou maintenance.

Since 1912, water and land use experts have encouraged Harris County, the City of Houston and the greater Houston area to better utilize our extensive bayou system, which extends through 22 watersheds. Our bayou corridors can and should serve a vital role providing parklands, open green spaces and water amenities.

Plans and warnings have often been ignored over the years resulting in missed opportunities to improve the quality of life and economic vitality of our community. In recent years, knowledge regarding the hydrological value of the bayou system and its ecological and economic significance has emerged as an important tool for use in urban planning.

Unfortunately, many of our bayous have been altered through straightening, stripping of bank-holding vegetation and lining with concrete bottoms as well as grass and concrete lined banks – practices that make it difficult to restore the bayous usefulness. This publication

is intended to help concerned citizens and agencies recapture some of these surrendered attributes and prevent further degradation.

Preservation of our precious few unaltered streams, generally tributaries to the main bayous and upper Buffalo Bayous, is critical. Through restoration efforts, bayou corridors can become affective again in providing rainwater absorption, floodwater management, pollutant filtration, air and climate quality improvement through planting efforts, and vital natural habitats for the wildlife that shares our space.

Revitalization of a portion of Buffalo Bayou, from Shepherd to the Turning Basin, has been proposed in conjunction with the 2002 Thompson Design Plan, sponsored by the Buffalo Bayou Partnership. This plan has the potential to restore some of the attributes of a river and provides an economic boost to an under-utilized section of downtown to the Turning Basin.

The Memorial Park Demonstration Project along Memorial Park and River Oaks Country Club is planned to restore a portion of Buffalo Bayou to a more natural and sustainable configuration with fluvial geomorphologic features and native plantings.

A citizen-pushed endeavor, termed the Quality of Life Coalition, has pinpointed the economic value of our riverine system. Knowledge of native vegetation, trees, and plants is critical to efforts to protect and restore our watersheds.

In November 2012, City of Houston voters passed a resolution by a wide margin to establish more park space along our bayous with the "Parks By You" referendum. What a resounding endorsement of the value of our bayous!

The Bayou Preservation Association was incorporated as a tax-deductible nonprofit organization in 1966 by a group of citizens alarmed by what was happening to our rivers. The organization began an effort to protect Buffalo Bayou from the concreted fates of Brays Bayou and White Oak Bayou. Knowledge of fluvial geomorphology, the study of riverine landforms, was becoming increasingly important. Locally, people began to recognize that straightening and stripping rivers of their curves and vegetation contributed to downstream flood transference.

In the case of Buffalo Bayou, George Mitchell, then president of the BPA, enlisted the help of Congressman George H.W. Bush, who requested the Army Corps of Engineers conduct a re-study of the plan in 1966 and 1967. Subsequently, the Corps withdrew its structural solution. In the 1970's, the Corps began to heed the call for nonstructural solutions to riverine flooding. In other states, previously concreted waterways were being restored to their natural condition.

What was once perceived as a "green" environmental issue is now also recognized as an important economic issue. Expenditures that were once devoted to altering Mother Nature's rivers are now directed toward changing our previous detrimental behavior. Through the Federal Flood Insurance Program, some relief is being granted to those already imprecidently located in the floodplain. Efforts are also underway to prevent additional imprudent development. In Harris County, repetitive losses due to flooding place a serious strain on private and public budgets. Both the Harris County Flood Control District and FEMA are now buying out repeatedly flooded properties and removing high-risk buildings as quickly as funding permits.

Finally, this planting guide comes as a crucial and overdue endeavor. It is important for the owners and managers of property along our bayous to realize that to continue enjoying bayou views and other benefits, we must work together with nature to preserve and restore streambanks.

This publication provides essential knowledge. Mindful of the Association of State Floodplain Manager's mantra, "No Adverse Impact," we must remember that our impact on the land in bayou watersheds affects those who live downstream.

*"We all look at Nature too much,
and live with her too little."*

- Oscar Wilde

INTRODUCTION

by Carolyn White and Steve Hupp

Navigating the greater Houston area, from prairie uplands and edges of the piney woods to coastal wetlands and bays, the waterways of our region host a diverse mix of plants and wildlife unmatched in its richness. These bayous, along with their associated wetlands, provide connections between unique habitats. These riparian areas are also vital to maintaining water quality, buffering flood risk potential, providing nurseries for fish, controlling erosion and supporting recreational pursuits.

Wetlands are transitional areas between uplands and water. They host water-dependent vegetation in their water-logged soils. Within the greater Houston area, there are three major types of wetlands: tidal or estuarine wetlands located along the coast, freshwater wetlands of the prairies and flat woods, and forested wetlands along rivers and bayous.

Systematic changes in wetland plant species follow the transition from inland freshwater habitats to coastal saltwater habitats as two critical parameters change, salinity and elevation above the water surface. Changes in salinity within the wetlands dictate the diversity of plants that are supported.

Plant diversity decreases as salinity increases. In addition, as one moves higher in elevation, away from and above the water surface, the mixture of species comprising the plant community also changes. This variation in plant life associated with a water system is especially dramatic in riparian areas. Riparian areas comprise the unique vegetative zone found along rivers and bayous.

Over a short distance, the list of plants that can be supported shifts depending upon the amount of and duration of water they receive from rivers or bayous. Riparian vegetation is particularly important in maintaining water quality and providing habitats.

Critical functions of a riparian ecosystem with canopy cover include providing shade, which moderates water temperature and increases the oxygen necessary to support aquatic life; providing inputs of nutrients; filtering

sediments and pollutants from runoff; and promoting bank stability.

While there is some regulatory protection for wetlands through a permit process, many smaller wetlands and especially riparian corridors are not adequately protected by existing laws and their enforcement. Development trends also constrain land available to support freshwater wetlands in the Houston area.

Loss of saltwater wetlands along the upper Texas coast and bays has resulted from land subsidence due to geologic compaction of ancient coastal plain sediments, hastened by extraction of oil, gas and groundwater. Freshwater inflows required to support estuarine wetlands along the bays of the upper Gulf Coast region are also threatened. The increases in impervious cover from development has reduced the infiltration of rainfall and reduced the amount of shallow groundwater that also supports riparian habitats.



It is important for individual landowners to act as stewards by fostering healthy riparian and wetland vegetation on their properties. This guide provides a key to the native vegetation associated with riparian habitats in the Houston region for the purposes of conservation and enhancement.

Riparian restoration practices involving vegetation are outlined for landowners, decision makers and other stakeholders. In addition to being useful along bayou corridors, many of the plants profiled in this guide are also suitable for use in and around bioretention areas, swales, ditches, bogs, seasonal wetlands, bottomlands, moist forests and wet prairies.

This updated second edition of the Bayou Planting Guide doubles the number of plants profiled and lists species that are often commercially available.

Carolyn White is an environmental planner, Advisory Board member of the Bayou Preservation Association, and member of the Water Quality Committee.

Steve Hupp is the Bayou Preservation Association's Water Quality Director.

THE BAYOU PLANTING GUIDE

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RESTORING OUR BAYOUS

The following general suggestions relate to four major types of land restoration efforts conducted along riparian corridors in south-east Texas. For additional technical assistance, see Resources (page 93) and Recommended Reading (page 93).

RIPIARIAN WETLAND RESTORATION TIPS

Wetlands are transitional areas between water and uplands. They host water-dependent plants in their waterlogged soils.

- Avoid scraping or otherwise severely disturbing toe (foot of a bank, see Glossary) of the streambank or water's edge on project sites to keep from causing unacceptable levels of erosion. Install live stakes, seedling, plugs or containerized plants manually.
- Use erosion control fabric or tacked-down straw to prevent erosion and to increase the odds of plant survival.
- Locate plants with regular moisture needs low enough (toe or water's edge) to ensure adequate moisture is present during low water periods. Conversely, check plant descriptions and check out local native and naturalized ecosystems for reference, to determine which plants will tolerate heavy water flow and submersion during high water periods.
- Weed manually or mechanically (with caution) as needed and fill in bare areas after weeding with more plants if possible.

RIPIARIAN WOODLAND RESTORATION TIPS

Riparian woodlands consist of various types of woodland forest ecosystems located along streams that are mostly, if not completely, dominated by trees.

- Plant densely with a substantial number of trees from seedling size to 15-gallon container size. Expect a moderate percentage of plant loss when seedlings are planted.
- Keep in mind that native trees in woodlands are often capable of growing much closer to each other than non-native trees in cultivated landscape settings. Restoration efforts will be most successful on a long-term

basis if a woodland ecosystem is established rather than a simple collection of trees.

- Plant during winter months if possible, so trees have the best chance to become established enough to survive their first summer in the ground.
- Remove noxious weeds manually as needed. Undesirable grasses can often be allowed to grow between trees over the short term. As the trees begin providing an increasing amount of shade, most grasses as well as many sun-loving pioneer weeds will begin to decline in health. At that point, shade-tolerant understory shrubs, groundcover and perennials can be established with greater ease.
- Mulch new trees and seedlings three to four inches thick with pine straw or coarsely shredded native mulch.
- Avoid removing lower limbs on young trees if possible. Trees will develop more qualitatively if greater quantities of branches are present.
- Please note that purchasing trees in container sizes of 65-100 gallons rarely provides a good return on the initial investment when a large numbers of trees are needed. When planted at the same time, 15-gallon trees and 100-gallon trees are often the same size after 10 years.
- Water new trees as needed and pay especially close attention to their health during the first summer following planting.

PRAIRIE RESTORATION TIPS

A prairie is a grassland of native grasses, sedges, rushes and forbs with woody plants making up less than 10 percent of the plant community. Prairie ecosystems can occur along the banks and slopes of streams when adequate sunlight is present.

- Scalp existing non-native grasses and weeds to the ground, remove the debris and then lightly rough up the topsoil layer to a one-inch depth with a steel bow rake (soil rake) or a comparable tool.
- Plant any plants intended for the restoration area, that

"There is no unemployed force in Nature. All decomposition is recomposition."

- Ralph Waldo Emerson

are in plugs or containers, before seeding.

- Broadcast prairie plant seeds by hand or with a seed spreader (available at most feed stores and nurseries) after mixing the seeds with coarse sand at the ratio of one part seed mix to four parts sand in order to make broadcasting easier.
- Proceed by rolling or pressing the seeds into the soil to keep them in place and to minimize loss to birds.
- Weed aggressively, by hand if possible, for the first several years after planting and mow to a six-inch height once a year or implement a controlled burn once each year if possible.
- Use weed eaters as needed to keep weeds and non-native grasses less than one foot in height the first two years if weeding by hand has not kept unwanted weeds in check.

WILDFLOWER MEADOW RESTORATION TIPS

Wildflower meadow restoration projects typically involve adding native wildflowers (but not tall prairie grasses) to existing non-native grassland that is periodically mowed. Wildflower meadows can occur along the top banks and slopes of streams provided adequate sunlight is present.

- Select well-drained, sunny sites for wildflower seeding

projects for best results. Add seeds in early fall to optimize germination.

- Choose regionally adapted wildflower blends. Consider wildflower mixes produced by Wildseed Farms, www.wildseedfarms.com, (800) 848-0078; or Native American Seed, <http://seedsources.com>, (800) 728-4043.
- Scalp existing non-native grasses and weeds to the ground. remove debris and rake soil with a steel bow rake to a depth of one inch.
- Broadcast seed at recommended rates by hand or with a seed spreader after mixing one part seed mix to four parts coarse sand to make spreading easier.
- Roll the ground after broadcasting seeds to press them into the soil.
- Wildflowers must be given a chance to go to seed in the spring. The naturalization process requires the skipping of a few mowing cycles in the spring. Wild-

"I am at two with nature."

- Woody Allen

flowers need to be left alone for two to three weeks after flowering has finished. Avoid mowing lower than six inches to avoid damaging perennial wildflowers.

- Wildflowers generally do not need to be fertilized. Fertilization can actually give weeds an advantage.
- Supplemental seeding will be necessary for several years after the initial seeding. Newly seeded areas may need to be watered periodically to prevent the soil from becoming completely dry.

EROSION CONTROL TIPS

MULCHING. Tacked-down straw, including pine straw, is the most effective mulch for bayou slopes, followed by coarsely ground, recycled native mulch, shredded to three to six-inch lengths. Avoid fine-textured mulches or those likely to decompose quickly. Install a three to six-inch mulch layer. Mulch layers need to be touched-up periodically during the first few years of restoration until plantings have become dense. Jute netting, netting made of organic fibers, can provide additional strength to banks until plants have had a chance to become established. Jute netting should be overlaid with other mulches.

*"Plant and your spouse
plants with you; weed
and you weed alone."*

*-Jean-Jacques
Rousseau*

BANK RESTORATION. If slope failure should occur, consult "Biotechnical and Soil Bioengineering Slope Stabilization," by Sotir and Gray for ideas regarding bioengineering solutions for streambank restoration. Other resources for natural channel design and stream restoration are available through various consultants including Dave Rosgen of Wildland Hydrology Consultants. Slope failure has occurred when erosion has degraded a streambank to the point that plants alone will not be capable of stabilizing a streambank. According to environmental planner Carolyn White, channel stability is the ability of a stream to transport the water and sediment of its watershed in such a manner as to maintain its dimensions, patterns and profile over time without either aggrading or degrading.

TOP BANK BERMS. Consider improving the grade along the top bank above erosion-prone slope areas in order to spread out and lessen the force of water runoff. Or, consider establishing top bank berms (raised soil areas) to divert water runoff from highly erosion-prone slope areas.

MINIMIZE SOIL DISTURBANCES. Tilling, needlessly stripping helpful vegetation, careless grading and construction activities create bare soil or disturbed soil conditions which are far more erosion prone. Avoid stripping a site clean when conducting restoration projects. Remove only aggressive alien weed species that present a threat to restoration success.

VEGETATION DIVERSITY. By planting a diverse mixture of overstory, understory and ground-dwelling native plant species, the variety of root structures will collectively lead to a mosaic-like fabric of roots capable of providing enormous erosion resistance to streambanks. Vegetation helps prevent rainfall-related erosion and wind erosion, and is beneficial by filtering sediment out of water runoff. Vegetation helps improve streambank absorption capacity so that more moisture is retained in the streambank.

STAKE STONE TOES. If stone toes are present along bayou bottom areas, consider driving cut branches (stakes) into the soil through openings in the stones. Willow, elderberry and cottonwood cuttings are conducive to being used as stakes.

HERBICIDES. Careful use of herbicides can be a useful tool in vegetation management for habitat restoration, particularly in removal of non-native, invasive plant species. Herbicides kill target species and should be managed to not kill non-target species. The killing of non-target species can lead to bare soil and increased erosion. If herbicides run off into bayous, the active ingredients may kill aquatic vegetation and/or harm other aquatic life. Herbicides also degrade the quality of soils by suppressing helpful microbe populations. Weed species should be controlled manually, mechanically, and by outcompeting them through active restoration of tough native species, whenever possible. Herbicides can be valuable tools for controlling non-native, invasive vegetation, when they are used properly by an educated and careful user. Pinpointed applications on targeted individual plants can be done with no to minimal effect on non-target plants. Avoid general broadcast of herbicide as this leads to bare soils, erosion and impacts in waterways. Always read and follow the instructions on

the label (by law), for the herbicide and the type of application being performed.

FEASIBILITY. Assess whether or not vegetative restoration alone will provide a sufficient remedy along a streambank, or whether the risk of slope failure exists. If slope failure is a possibility, professionally installed and permitted bioengineering solutions may be needed. Local governmental agencies such as city public works departments, the Army Corps of Engineers and county flood control districts are responsible for permitting issues. For more information, consult the booklet "Guidelines for Streambank Restoration" (see bibliography), the book, "Soil Bioengineering Slope Stabilization" (see bibliography), and the book, "Stream Corridor Restoration, Principles, Process and Practices" by the Federal Interagency Stream Restoration Working Group, 1998.

PLANTING TIPS

OBSERVE. Study riparian ecosystems in the general area to determine which plants are affective in the immediate vicinity. Find out which plants are typically among the dominant species, which species occur on an accent or complementary basis and which plants appear to function well as companion plants.



Keep in mind that some of the plant species observed may be undesirable, aggressive alien weed species capable of taking over a bayou corridor and compromising its biological diversity. Some native species that were historically present in the area, but are currently absent, may be worthy of reintroduction. Also, consider that streambank characteristics can vary enormously from place to place, even within a small bio-region.

CHOOSE NATIVES. The term native is generally defined as referring to those plants that were present in a given area when European explorers arrived in the area and started chronicling plant species. Native plant species are ultimately time-tested plants and usually perform reliably when reintroduced and sited properly in their native ranges.

BE CAUTIOUS WITH NON-NATIVE SPECIES. It is generally advisable to avoid introducing non-native plants to native riparian ecosystems, since they may take over or cause unforeseen problems. While it is true that several

non-native plant species can make complementary companions to native plants in cultivated gardens and landscapes, riparian ecosystems are not considered cultivated. Unwanted dispersion from water movement can spread non-native species.

Complementary non-native plant species for cultivated gardens are those that tolerate local conditions, provide wildlife habitat, food, and medicine, benefit soils or provide other useful functions without becoming pests after escaping cultivation.

On the other hand, aggressive and invasive non-native plants can damage riparian ecosystems by displacing native plants and by reducing biological diversity, a process that can lead to land degradation involving decreased habitat value (fewer types of berries, nuts, leaves, nectar sources, cover, etc.) and a reduction in the variation of different root structures and plant canopies, leading to compromised bank stability.

The following aggressive and invasive non-native plant species are occasionally planted along and near bayou corridors but should be strictly avoided: *Triadica sebifera* (Chinese Tallow), *Ligustrum sinense* (Chinese Privet), *Wisteria sinensis* (Chinese Wisteria) and *Lonicera japonica* (Japanese Honeysuckle). Aggressive non-natives often do not experience the same natural checks and balances (diseases and pests) that may keep them from causing severe damage to ecosystems in their lands of origin. For information on the “Dirty Dozen”, visit www.bayoupreservation.org.

PLANT IN WAVES. It is advisable to approach a plant restoration project as a three to seven-year process. The risk of substantial plant loss due to floods, drought or other factors can be greatly minimized by planting the bulk of the plants over the first year or two at different times during the same year. Additional plantings in subsequent years can help with fine tuning and filling in areas that have suffered plant losses.

ORGANIZED CHAOS. Plant in semi-random but planned patterns that resemble those found in natural ecosystems.

“Nature will out.”

- Aesop
(6th cent. B.C.)

Visit climax-plant community models (mature ecosystems) before undertaking restoration projects. Implement diverse planting schemes rather than monocultural (one species) or limited diversity schemes. Avoid menagerie plantings with an emphasis on planting of one of every known species that might have a chance of survival.

Instead, plant larger numbers of several different co-dominant plant species (foundation, staple plants) that are commonly found in large quantities in native ecosystems. Subsequently, plant smaller numbers of a larger variety of accent or complementary species to increase overall diversity, performance, habitat value and ornamental interest. Avoid lining plants up in rows so that roots can more quickly form mosaic growth patterns to stabilize banks quicker.

SPACING. Conventional planting schemes (specimen landscape collection) in cultivated landscapes involving non-native plants often emphasize distant spacing patterns between woody species (trees and shrubs) to prevent disease and insect problems. Conversely, native companion plants can often be spaced closer to one another than non-natives because these plants have been historically conditioned to grow together as integrated components of multi-species ecosystems.

PRACTICE LAYERING. When restoring a woodland, prairie or wetland, it is important to make sure multiple vertical layers of plants are represented. Plant overstory, understory, and ground dwelling plants together. Layering increases the overall resilience and habitat value of an ecosystem.

WHEN DIGGING. Dig holes for container-grown plants at least twice as wide as the diameter of the root ball. Dig holes slightly more shallow than the depth of root balls so the top of the root ball is slightly above grade (ground level) when planting is finished. Dig planting holes with jagged sides, so that spreading roots will be less likely to grow in circles causing eventual plant death or lack of vigor from root girdling.

AVOID ROOT-BOUND PLANTS. Steer clear of planting plants with roots already growing in circular patterns around the edge of the root ball. Check plants before purchasing them to try to prevent this problem. If you find yourself stuck with root-bound plants, prune some of the outlying roots as if cutting into a pie. Then pull the roots



and spread them outward when placing the root ball in the planting hole, so that the roots will have a chance to grow outward, rather than in circles.

Keep in mind that even moderately root-bound plants often revert back to root-girdling growth patterns even if root pruned. The girdling problem is mostly related to woody plant species such as trees and shrubs. Many herbaceous perennials will outgrow root-bound conditions.

BACKFILL WITH NATIVE SOIL. Backfill planting holes with native soil, the same soil that was removed from the hole. Do not add improved soils around the sides of the root ball. Improved soils below around level can lead

to root rotting since they often contain more moisture-retentive organic matter than the surrounding native soils. Also, the organic matter (compost, bark mulch, rice hulls) in improved bedding soils will eventually decompose, causing the level of soil around the root ball to drop, possibly exposing roots or leaving sink holes around the root ball.

*“I think that I shall never see
A billboard lovely as a tree.
Indeed, unless the
billboards fall
I’ll never see a tree at all.
- Ogden Nash*

SEEDINGS. Sharpshooters are spades with long, narrow blades that can be used to slice the soil and create a planting wedge suitable for inserting seedlings without lateral roots. After inserting a seedling into the sliced opening, the soil can be pressed into place around the seedling with firm foot pressure.

CUTTINGS. Fresh cuttings of black willow, eastern cottonwood and rough-leaf dogwood can be driven into slopes and toes as live stakes, which are living, woody plant cuttings capable of rooting with relative ease. Live staking is an effective system for securing natural material erosion control fabrics such as jute mesh, coir or other blanket surfaces.

Cuttings can be acquired from native or naturalized population, with permission. Stems to be used for cuttings should be cut 8-12 inches from the ground. Side branches should be removed. The stakes will work best if they are 1.5 inches in diameter and 2 to 3-feet long. The bottom ends should be cut at an angle and the tops should be flat. A dead blow hammer (filled with sand) can be used to drive in the stakes.

"Even if I knew that tomorrow the world would go to pieces, I would still plant my apple tree."

- Martin Luther

Stakes can be spaced 2 to 3 feet apart in staggered patterns. Eighty percent of the length of stakes should be driven into the ground at right angles to slopes. If buds are present, make the end on which they occur the top end.

Consult the book, "Biotechnical and Soil Bioengineering Slope Stabilization," by Sotir and Gray for information about advanced techniques for using cuttings including fascine, brushlayer and branchpacking installation. Cuttings should be used during the dormant season, they need to be kept moist during storage, and they should be used when fresh on the same day as installation.

STAKING Placing stakes around trees for stability is only recommended if trees are very top heavy. Staking trees with balanced tops and bottoms retards their resilience and development.

THE KEYS FOR SUCCESSFUL ESTABLISHMENT

ESTABLISHMENT PERIOD. Case studies have indicated it generally takes at least seven to ten years of intensive work and monitoring to restore an ecosystem or natural habitat.

WEEDING. Preventing alien invasive plants such as Chinese tallow from taking over newly restored areas may be the most serious threat to success. Weeds should be removed by hand or mechanically depending on the situation. Increasing plant density may help restored ecosystems outcompete seeds of invasive plants.

WATERING. Ideally, planting should take place between fall and early spring to minimize the chances of plant death due to drought stress. During the first year, new plantings should be watered twice per week for the first four weeks (on average), once every two weeks from November to February, once per week during the months of October, March and April, and once to twice per week from May to September. Schedule adjustments should be made during drought or rainy periods. Plantings should require less supplementation during the second year. It is extremely important to water as slowly and deeply as possible to encourage deep rooting and to minimize erosion. It may be necessary to water a specific area two to three times back to back in order to be able to water deeply enough without causing runoff.

SOIL FERTILITY. It is often not necessary to fertilize streambanks if the fertility of existing soils has not been degraded. Consider testing soil as needed to assess fertility levels or toxin levels if needed.



If fertilizing, use low analysis, slow release, dry natural organic fertilizers such as alfalfa meal 3-1-2, Microlife 6-2-4, or Earth's Essentials 5-1-3. These fertilizers can be applied

in early spring and again in the fall at an average rate of 20 pounds per 1,000 square feet. Trees should not be fertilized individually. Instead, fertilizers should be broadcast over the entire soil area. It is important not to use quick release, high nitrogen or phosphorous fertilizers due to the runoff pollution that will result. Slow release organic fertilizers are preferable to time release chemical fertilizers due to the fact that organic fertilizers add helpful organic matter to bayou slopes and stimulate the development of the soil food web (beneficial microbial populations). The soil microbes help make nutrients available to plants, help convert organic matter to humus and help fight off disease causing pathogenic microbes.

MULCH. Maintain adequate mulch layers during establishment periods where possible to prevent erosion, to minimize weed intrusion and to preserve moisture. Pine straw often works best, followed by coarse shredded native mulch. Pine straw may need to be tacked down on steep slopes. Erosion control fabrics are useful for providing extra support to slopes during the establishment period.

SUPPLEMENTAL PLANTINGS. Supplemental plantings will usually be necessary on a periodic basis for several years to fill in sections with struggling plants, to replace dead plants and to compensate for environmental or construction related damage to restored bayou areas.

ANIMAL DAMAGE. In some instances it may be necessary to protect new plantings from forage damage by using tree shelters, selective fencing or by reintroducing predators if appropriate. Careful consideration should be given to whether desired plant species will survive foraging damage. Some plant species such as Ruellia will suffer severe damage early, and then they will self-propagate aggressively until a sustainable population level has been achieved.



"Nothing in nature is isolated. Nothing is without reference to something else. Nothing achieves meaning apart from that which neighbors it."

- Goethe; 1749-1832

MONITORING. Streambank restoration projects should be monitored routinely during the first seven to ten years, and especially after each significant high-water period. Erosion damage discovered during monitoring must be addressed proactively in order to sustain streambank integrity. Detailed field notes should be kept that chronicle the changes that occur over the years to facilitate a deeper understanding of the natural and unnatural processes affecting a particular bayou corridor.

The success or demise of specific plant species, challenges with aggressive weed species and changes in the course and condition of the bayou should be chronicled. The effects of erosion and sedimentation as well as the maturation or degradation of the overall riparian ecosystem should be carefully noted.

LARGE TREES



PREFERRED HABITAT: moist woods, along streams.
USUAL SIZE: 40-80 feet.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay, limestone; moist, well drained.
LIGHT: part shade, full sun.
FOLIAGE: deciduous, with leaves turning lemon to gold in fall.

FLOWERS: February-April, before the leaves, petals absent, red to green.
FRUIT: a samara, about ½ inch long, red to green, March-June.
BARK/BRANCHES: light to dark gray, ridges flattened and scaly, fissures deep.
SPACING: 30-60 feet.
PROPAGATION: by seed, cuttings.
WILDLIFE VALUE: fruit is eaten by birds, and the young twigs and leaves are browsed by white-tailed deer, opossum and cottontails.
TRADE AVAILABILITY: fair.
COMMENTS: A very desirable ornamental tree for street and park planting.



PREFERRED HABITAT: wetlands, low woods.
USUAL SIZE: 30-60 feet, can reach 140 feet, trunk is 3-4 feet in diameter.
BAYOU SITE: top bank, lower slope.
SOIL TYPE: sand, loam, clay, acid; poor drainage ok.
LIGHT: partial shade to full sun.
FOLIAGE: deciduous, 2-5 inches long, red leaves in fall.
FLOWERS: April-June, greenish.

FRUIT: blue-black drupe in late summer to early fall.
BARK/BRANCHES: grayish brown to black bark.
SPACING: 30 feet.
PROPAGATION: by seed in the fall, cuttings.
WILDLIFE VALUE: nectar source for insects, foliage for deer, fruit for birds and mammals.
TRADE AVAILABILITY: fair to poor.
COMMENTS: A great accent tree with outstanding fall color. Slow growing and has a taproot. Good erosion control for sandy soils.



PREFERRED HABITAT: forested wetlands, riverbanks.
USUAL SIZE: 45-60 feet, up to 150 feet, 3-6 foot trunk diameter.
BAYOU SITE: toe, lower slope.
SOIL TYPE: sand, loam, clay, poor drainage and routine submersion okay.
LIGHT: partial shade to full sun.
FOLIAGE: deciduous, feathery, copper in fall.
FLOWERS: March-April.
FRUIT: ½ inch cones in fall.

BARK/BRANCHES: gray to reddish brown.
SPACING: 40-50 feet.
PROPAGATION: by seed.
WILDLIFE VALUE: seeds for birds, nesting.
TRADE AVAILABILITY: good.
COMMENTS: This tree was once widespread and is an excellent choice for erosion control. The "knees" are like a natural bulkhead.



PREFERRED HABITAT: prairies and rich bottomland woods.
USUAL SIZE: 50-80 feet, can reach 160 feet.
BAYOU SITE: top bank.
SOIL TYPE: deep loam; slightly acid to calcareous.
LIGHT: part shade to full sun.
FOLIAGE: deciduous, pinnately compound, 1-2 feet long, yellowish

green, and 11-23 leaflets.
FLOWERS: yellowish green in May-June.
FRUIT: large edible nut ripening in September-October.
BARK/BRANCHES: grayish brown, black, or reddish.
SPACING: 50-60 feet.
PROPAGATION: by seed, cuttings.
WILDLIFE VALUE: nuts for squirrels, and a larval plant for moths.
TRADE AVAILABILITY: poor.
COMMENTS: Long lived, moderately fast growing tree.



PREFERRED HABITAT: forests, and along streams.
USUAL SIZE: 40-80 feet, can reach 100 feet.
BAYOU SITE: top bank, mid to upper slope.
SOIL TYPE: loam, clay-loam, well drained.
LIGHT: shade to full sun.
FOLIAGE: deciduous, finely callous-serrate.

FLOWERS: racemes with white flowers in spring.
FRUIT: drupe borne in racemes, thin skinned, black when ripe.
BARK/BRANCHES: reddish brown, gray or white.
SPACING: 10-18 feet.
PROPAGATION: seed, cuttings.
WILDLIFE VALUE: fruit for birds, foliage for butterfly larvae.
TRADE AVAILABILITY: poor.
COMMENTS: The fruit is edible only when ripe.



PREFERRED HABITAT: banks of rivers and streams.
USUAL SIZE: to 70 feet, can reach 120 feet.
BAYOU SITE: toe, lower slope.
SOIL TYPE: clay, loam, sand, poor drainage okay.
LIGHT: full sun.
FOLIAGE: deciduous, 3-6 inch long, green, narrow leaves with pale undersides.
FLOWERS: spring in aromatic catkins, April - May.

FRUIT: tiny capsules, May-June.
BARK/BRANCHES: light brown to black, scaly, deep, fissures.
SPACING: 20 to 30 feet, or much closer if planting Willow stakes.
PROPAGATION: by seed, cuttings root when driven into banks as stakes or secured in banks as bundles.
WILDLIFE VALUE: nesting habitat and cover, foliage for deer and rabbits, twigs and bark consumed by some birds, nectar for bees.
TRADE AVAILABILITY: poor, best acquired by cutting branches from existing populations with permission.
COMMENTS: An extremely aggressive tree capable of stabilizing erosion prone banks. Must have partial to full sun to do well. Stands will decline in the shade.



PREFERRED HABITAT: woods, along streams.
USUAL SIZE: 60-80 feet.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay, caliche.
LIGHT: partial shade to full sun.
FOLIAGE: deciduous.
FLOWERS: yellowish green.
FRUIT: large acorns.

BARK/BRANCHES: light brown as twigs, light gray to reddish brown with fissures as bark.
SPACING: 30-50 feet.
PROPAGATION: acorns.
WILDLIFE VALUE: mammals and birds eat the acorns, and it is a larval host for butterflies.
TRADE AVAILABILITY: good.
COMMENTS: This has one of the largest acorns. Drought tolerant.



PREFERRED HABITAT: along streams.
USUAL SIZE: up to 100 feet, 3-4 foot trunk diameter.
BAYOU SITE: toe, lower slope.
SOIL TYPE: moist sandy loams.
LIGHT: sun.
FOLIAGE: deciduous, light green, broad, sometimes heart shaped, yellow in the fall.
FRUIT: May-June, small green capsules.

BARK/BRANCHES: stout trunk, large branches, rounded crown, gray to blackish bark on mature trees with ridges.
PROPAGATION: by seed, cuttings.
WILDLIFE VALUE: seeds for birds.
TRADE AVAILABILITY: fair to poor.
COMMENTS: A superb erosion management tool. Fast growing. Relatively shallow, spreading roots. A prolific self-seeder. Cuttings can be used for live stakes. High flood tolerance even though damage may occur.



PREFERRED HABITAT: along streams, bayous, and uplands.
USUAL SIZE: 30-60 feet.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay, caliche, and limestone.
LIGHT: partial shade to full sun.
FOLIAGE: deciduous, leaves turn yellow in fall.
FLOWERS: borne in July.
FRUIT: small seeds that are less than ½ inch long.

BARK/BRANCHES: brown, gray, or reddish, with flattened ridges.
SPACING: 20-30 feet apart.
PROPAGATION: by seed.
WILDLIFE VALUE: the seeds feed birds and mammals.
TRADE AVAILABILITY: good.
COMMENTS: Good tree for dry areas.



PREFERRED HABITAT: forests and prairies.
USUAL SIZE: 30-50 feet.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay, caliche, limestone, well-drained.
LIGHT: dappled shade, part shade, full sun.
FOLIAGE: evergreen, coarse or fine-cut and can vary in color from gray to blue, to dark green to light green.
FLOWERS: September-December, cone berry-like, pale blue, and sub-globose.

FRUIT: March-May, fleshy, purplish.
BARK/BRANCHES: Reddish brown, trunk more or less fluted and basally buttressed.
SPACING: 20 feet.
PROPAGATION: by seed, cuttings.
WILDLIFE VALUE: fruit for birds and mammals, nesting, cover.
TRADE AVAILABILITY: fair.
COMMENTS: Good tree for urban habitats; in particular if the bottom is not trimmed.



PREFERRED HABITAT: swamps, moist forests, along streams.
USUAL SIZE: 50-60 feet, can reach 100 feet.
BAYOU SITE: toe, lower slope, top bank.
SOIL TYPE: sandy loam, clay, tolerates poor drainage.
LIGHT: partial shade to full sun.
FOLIAGE: deciduous, leaves turn red and orange in fall, whitish undersides.

FLOWERS: red to green blooms on males in late winter to spring.
FRUIT: red to green, or brown fruit on females in spring to early summer, 1-1 ½ inch fruits have wings.
BARK/BRANCHES: upright crown; smooth, light gray bark when young, darker and more furrowed with age.
SPACING: 30-40 feet.
PROPAGATION: by seed.
WILDLIFE VALUE: seeds for mammals, birds, foliage for deer.
TRADE AVAILABILITY: fair to good.
COMMENTS: A very fast growing tree if sufficient moisture is present. Fall color can be outstanding.



PREFERRED HABITAT: woods, fields.
USUAL SIZE: 25-50 feet, can reach 70 feet.
BAYOU SITE: top bank.
SOIL TYPE: sand, loam, clay.
LIGHT: partial shade to moderate sun.
FOLIAGE: large smooth leaves, 2-6 inches long, deciduous, fall color.
FLOWERS: April-June, dioecious.

FRUIT: August-February, to 2 inches, orange when ripe, edible when soft after exposure to cold temperatures.
BARK/BRANCHES: brown to black bark, fissured, in block patterns.
SPACING: 20-25 feet.
PROPAGATION: by seed, cuttings.
WILDLIFE VALUE: fruit for wildlife and people.
TRADE AVAILABILITY: fair to poor.
COMMENTS: A very useful tree for erosion control along a bayou corridor due to its deep roots.



PREFERRED HABITAT: along rivers, creeks.
USUAL SIZE: up to 70 feet.
BAYOU SITE: top bank, slopes, toe.
SOIL TYPE: moist sandy loam, clay.
LIGHT: sun.
FOLIAGE: deciduous, bright green, 2-6 inches long, 1-2 inches wide.
FLOWERS: April-May dioecious.
FRUIT: summer-fall, 1 ¼ inch long seed.

BARK/BRANCHES: brown bark, flat ridges, furrowed.

SPACING: 40-50 feet.

PROPAGATION: by seed.

WILDLIFE VALUE: fruit for birds, leaves for mammals.

TRADE AVAILABILITY: fair.

COMMENTS: Fast growing roots make Green Ash one of the best trees for erosion control.



PREFERRED HABITAT: pineywoods, gulf prairies, marshes, post oak savannahs.
USUAL SIZE: 60-110 feet, can reach 170 feet, trunks to six feet in diameter.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, sandy loam, well drained.
LIGHT: full sun to partial shade.
FOLIAGE: evergreen, clusters of three

(sometimes 2), 5-10 inches long, light to dark green.

FLOWERS: yellowish green flowers.

FRUIT: cones ripen in September-November, 3-5 inches long, no stalk

BARK/BRANCHES: reddish brown, scaly blocks, deep furrows, large sections, papery scales.

SPACING: 2-25 feet.

PROPAGATION: seeds planted in the fall, spreads well by volunteering.

WILDLIFE VALUE: seeds for birds.

TRADE AVAILABILITY: good.

COMMENTS: An excellent top bank and upper slope stabilizing tree due to its extensive lateral root system, especially where deep sandy loam soils exist. Pine straw makes excellent mulch.



PREFERRED HABITAT: forested wetlands, along streams.
USUAL SIZE: up to 100 ft.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: moist sandy soils.
LIGHT: partial shade to full sun.
FOLIAGE: almost evergreen leaves, 2-6 inches long.
FLOWERS: staminate and pistillate catkins are borne separately on the same tree in spring.
FRUIT: acorn, ½ inch long.

BARK/BRANCHES: gray to black when older with furrows separated by flat ridges.

SPACING: 50-75 feet.

PROPAGATION: by seed

WILDLIFE VALUE: The acorns provide food for mammals and birds.

TRADE AVAILABILITY: fair to poor.

COMMENTS: This is an attractive tree that is almost evergreen and it likes sandy soils.



PREFERRED HABITAT: woods, swamps, edges of streams.
USUAL SIZE: usually 50 feet or less, rarely to 120 feet.
BAYOU SITE: top banks, slopes.
SOIL TYPE: sand, loam, clay, moist, well drained.
LIGHT: partial shade to full sun.
FOLIAGE: deciduous.
FLOWERS: white with yellow blotches and purplish spots.

FRUIT: capsule in October.

BARK/BRANCHES: gray to brown or reddish.

SPACING: 20-30 feet.

PROPAGATION: seed.

WILDLIFE VALUE: hummingbirds and insects are attracted to the flowers, and it is the larval host plant for the Catalpa Sphinx Moth.

TRADE AVAILABILITY: poor.

COMMENTS: The Southern Catalpa – *Catalpa bignonioides* is more common in the landscape trade, and it does occur in our area. But many botanists believe it is an out of range native from Georgia and Florida to Louisiana.



PREFERRED HABITAT: prairies, and upland areas of tree canopies.
USUAL SIZE: 40-60 feet.
BAYOU SITE: upper slope.
SOIL TYPE: sand, loam, clay, poor drainage is ok.
LIGHT: full sun.
FOLIAGE: evergreen leaves.
FLOWERS: pale yellow, 2 to 3 inches long, in spring.
FRUIT: acorns.

BARK/BRANCHES: dark gray-brown and rough.

SPACING: 30-60 feet.

PROPAGATION: by seed.

WILDLIFE VALUE: the acorns are eaten by birds and mammals.

TRADE AVAILABILITY: good.

COMMENTS: Live Oak is probably the most commonly planted native tree.



PREFERRED HABITAT: bottomlands of rivers and creeks.
USUAL SIZE: 80-120 feet.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay.
LIGHT: part shade to full sun.
FOLIAGE: deciduous, alternate, 5-7 lobed.
FLOWERS: borne in separate staminate and pistillate catkins.
FRUIT: acorns.
BARK/BRANCHES: light to dark gray or brownish to black.

SPACING: 40 feet apart.

PROPAGATION: by seed.

WILDLIFE VALUE: the acorns are eaten by birds and mammals.

TRADE AVAILABILITY: good.

COMMENTS: The leaves will usually turn yellow in the fall.



PREFERRED HABITAT: moist forests, banks of streams.
USUAL SIZE: 80-100 feet, can reach 150 feet, 3-5 foot trunk diameter.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: poorly drained clay soils.
LIGHT: full sun to partial shade.
FOLIAGE: deciduous, thin leaves, 7-9 inches long, 2-4 inches wide.

FLOWERS: March-April, catkins.
FRUIT: acorn, ½-1 inch tall, 1 inch across.
BARK/BRANCHES: trunk can reach 2-3 feet in diameter, bark is grayish brown-reddish.
SPACING: 50-75 feet.
PROPAGATION: by seed.
WILDLIFE VALUE: acorns for deer and birds, good cover, foliage for butterfly larvae.
TRADE AVAILABILITY: fair.
COMMENTS: This oak fits the bill when a poor drainage, heavy clay tolerant tree is needed. Somewhat oak wilt resistant. Slow growing.



PREFERRED HABITAT: near creeks, bottomlands.
USUAL SIZE: 30-50 feet, sometimes to 90 feet.
BAYOU SITE: toe, lower slope.
SOIL TYPE: sand, loam, clay, acid; poor drainage okay.
LIGHT: partial shade to full sun.
FOLIAGE: medium coarse textured leaves, bright green, whitish undersides, toothed edges, yellow leaves in fall, deciduous.
FLOWERS: flowers bloom in early spring,

male and female in separate catkins.
FRUIT: winged nutlets, 1/8 inch long, ripen April-June.
BARK/BRANCHES: pale brown to reddish brown, peels back creating a beautiful effect. Often multi trunked.
SPACING: 25-30 feet.
PROPAGATION: by seed, cuttings.
WILDLIFE VALUE: seeds for birds, foliage for deer.
TRADE AVAILABILITY: good.
COMMENTS: A very helpful tree for erosion prone areas, attractive features. Fast growing, somewhat shortlived. Shallow spreading roots.



PREFERRED HABITAT: along streams, bottomlands.
USUAL SIZE: often 60-70 feet commonly, can reach 160 feet.
BAYOU SITE: top bank.
SOIL TYPE: sand, loam, clay, caliche, well drained.
LIGHT: full sun.
FOLIAGE: coarse textured, yellowish green, 3-8 inch long, toothed edges, deciduous.

FLOWERS: male and female flowers separate on the same tree.
FRUIT: large, hard shelled nut in September-November.
BARK/BRANCHES: broad rounded crown, brittle wood, gray to light brown bark.
SPACING: 50-75 feet.
PROPAGATION: by seed, cuttings.
WILDLIFE VALUE: nuts for birds and mammals.
TRADE AVAILABILITY: good.
COMMENTS: A long-lived tree with a taproot. State tree of Texas.



PREFERRED HABITAT: woodlands, near streams.
USUAL SIZE: Often 50-60, can reach 110 feet with a trunk 4 feet in diameter.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sandy loam.
LIGHT: partial shade to full sun.
FOLIAGE: deciduous, yellow green, 5-7 inches long.

FLOWERS: March-June, in clusters.
FRUIT: nuts in September-October.
BARK/BRANCHES: light gray bark, shaggy, separates from tree into strips up to 12 inches long.
SPACING: 40-50 feet.
PROPAGATION: by seed.
WILDLIFE VALUE: nuts, birds.
TRADE AVAILABILITY: poor.
COMMENTS: The bark is a very interesting feature. A solid performer in moist, rich soils.



PREFERRED HABITAT: prairies and woodlands.
USUAL SIZE: to 75 feet.
BAYOU SITE: top bank.
SOIL TYPE: sand, acid, well drained.
LIGHT: part shade to full sun.
FOLIAGE: deciduous with leaves turning brown in fall.
FLOWERS: appearing with the leaves March-May.
FRUIT: acorns ripen in September-November.

BARK/BRANCHES: thick, gray to reddish brown bark and brown branches.
SPACING: 30-40 feet apart.
PROPAGATION: by seed and cuttings.
WILDLIFE VALUE: acorns for mammals, nesting for birds.
TRADE AVAILABILITY: poor.
COMMENTS: Many different varieties of Post Oak exist.



PREFERRED HABITAT: along streams, woods.
USUAL SIZE: 50-120 feet.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay.
LIGHT: full sun to partial shade.
FOLIAGE: deciduous, red in fall.
FLOWERS: light brown, 6 to 7 inches long, spring.
FRUIT: acorns.
BARK/BRANCHES: gray to reddish brown.
SPACING: 50-75 feet.

PROPAGATION: by seed.
WILDLIFE VALUE: acorns for mammals and birds.
TRADE AVAILABILITY: good.
COMMENTS: Commonly sold in the landscape trade.



PREFERRED HABITAT: along streams.
USUAL SIZE: 10-50 feet.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay.
LIGHT: partial shade to full sun.
FOLIAGE: deciduous, leaves turn shades of yellow and gold in fall.
FLOWERS: white, 5-10 inch panicles in May or June.
FRUIT: white to yellow or black berry.

BARK/BRANCHES: gray to reddish.

SPACING: 12-20 feet.

PROPAGATION: by seed.

WILDLIFE VALUE: berries for birds.

TRADE AVAILABILITY: poor to fair.

COMMENTS: The berries have historically been used for a soap like substance, even though they are considered poisonous.



PREFERRED HABITAT: coastal plains, moist forests.
USUAL SIZE: 60-80 feet, up to 100 feet, 2-7 foot trunk diameter.
BAYOU SITE: top bank.
SOIL TYPE: sand, loam, clay, tolerates poor drainage.
LIGHT: partial shade to full sun.
FOLIAGE: deciduous, large leaves turn red in fall, wavy leaf edges.

FLOWERS: catkins, April-May.

FRUIT: one seeded nut, ¾-1 ½ inch long.

BARK/BRANCHES: narrow head, distinctive light gray bark.

SPACING: 50-75 feet.

PROPAGATION: by seed.

WILDLIFE VALUE: acorns for deer and birds, good cover, foliage for butterfly larvae.

TRADE AVAILABILITY: poor to fair.

COMMENTS: This oak is at its best in natural settings such as heavy soils along top banks. Some what oak wilt resistant. Slow growing.



PREFERRED HABITAT: moist woods, along streams.
USUAL SIZE: 50 feet, up to 135 feet, trunk diameter of 2-3 feet.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay, well-drained.
LIGHT: partial shade to full sun.
FOLIAGE: large, dark green, 5-8 inches long, glossy leaves, rusty undersides, evergreen.
FLOWERS: showy white flowers, May-early summer, 6-9 inches, fragrant.
FRUIT: cone with exposed red seeds, July-October.

BARK/BRANCHES: brown, dense branching structures, rounded crown.

SPACING: 50-75 feet.

PROPAGATION: by seed, cuttings.

WILDLIFE VALUE: fruit for birds and mammals.

TRADE AVAILABILITY: good.

COMMENTS: This elegant tree is "tough as nails" and forms dense root mats. Often has a pyramidal shape. Avoid pruning off lower branches.



PREFERRED HABITAT: moist upland woods, fields.
USUAL SIZE: often 50-70 ft, up to 150 feet, trunk diameter of 3-5 feet.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: moist sandy loam, clay loam.
LIGHT: sun.
FOLIAGE: star-shaped leaves, deciduous, outstanding fall color (red and yellow).
FLOWERS: March-May, small green.

FRUIT: September-November, 1-1 ½ inch balls.

BARK/BRANCHES: often cork winged branches, rough bark, furrowed, brown to gray.

SPACING: 25-35 feet

PROPAGATION: by seed, cuttings.

WILDLIFE VALUE: fruit for birds, mammals.

TRADE AVAILABILITY: fair.

COMMENTS: A fast growing tree well suited to bayou corridors. Its fall color is the tree's most distinctive feature.



PREFERRED HABITAT: along streams, woods.
USUAL SIZE: usually 40-60 feet, rarely to 100 feet with a trunk 2-3 feet in diameter.
BAYOU SITE: top banks, slopes.
SOIL TYPE: sandy, loam, clay.
LIGHT: sun to partial shade.
FOLIAGE: light green, deciduous, 2-4 inches long.
FLOWERS: spring, small, inconspicuous, greenish.

FRUIT: orange or red to black drupe.

BARK/BRANCHES: light gray-brown, with warts.

SPACING: 20-30 feet.

PROPAGATION: by seed.

WILDLIFE VALUE: fruit for birds, foliage for butterfly larvae.

TRADE AVAILABILITY: poor.

COMMENTS: A tough tree that reseeds so easily, it's often considered a nuisance in home landscaping. Although native, it is not usually advisable to plant this tree due to its aggressiveness, but it can make sense to preserve existing stands along highly erodible stream banks.



PREFERRED HABITAT: forested wetlands, along streams.
USUAL SIZE: 65-75 feet, can reach 170 feet, trunk, 3 to 12 feet in diameter.
BAYOU SITE: top bank, slope, toe.
SOIL TYPE: sandy loam.
LIGHT: full sun to partial shade.
FOLIAGE: deciduous, large, broad leaves turn yellow in fall.

FLOWERS: April-May, inconspicuous green balls.

FRUIT: September-October, 1-1 ½ inch brown balls.

BARK/BRANCHES: reddish brown to brown bark, scales flake off, whitish new bark.

SPACING: 40-50 feet.

PROPAGATION: by seed, cuttings.

WILDLIFE VALUE: seeds for birds.

TRADE AVAILABILITY: fair to good.

COMMENTS: This long-lived tree is very helpful in terms of stabilizing bayou banks due to its interwoven root system. It also has beautiful bark and foliage.



PREFERRED HABITAT: waterways and swamps.
USUAL SIZE: up to 100 feet, usually less.
BAYOU SITE: toe and moist top banks.
SOIL TYPE: sand, loam, clay.
LIGHT: part shade to full sun.
FOLIAGE: deciduous.
FLOWERS: yellow catkins.
FRUIT: thin shelled, brown Hickory nuts.

BARK/BRANCHES: grayish brown.
SPACING: 20 feet.
PROPAGATION: seed.
WILDLIFE VALUE: squirrels and ducks eat the nuts.
TRADE AVAILABILITY: poor.
COMMENTS: This species of Hickory is the most tolerant of wet conditions.



PREFERRED HABITAT: along streams, woods.
USUAL SIZE: 50-60 feet, 1-2 ½ feet trunk diameter.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: loam.
LIGHT: full sun.
FOLIAGE: deciduous, 1 ⅔ inches long, serrate, pointed tips.
FLOWERS: before leaves in Spring.
FRUIT: winged nutlet, orange to red, in the fall.
BARK/BRANCHES: gray to reddish brown bark, thin branches, corky wings on twigs.
SPACING: 40-50 feet.
PROPAGATION: by seed, easily.
WILDLIFE VALUE: foliage for butterfly larvae.
TRADE AVAILABILITY: fair.
COMMENTS: A very well adapted Elm for bayou corridors.



PREFERRED HABITAT: in woods and along streams.
USUAL SIZE: to 80 feet.
BAYOU SITE: lower slope, upper slope, top bank.
SOIL TYPE: sand, loam, clay.
LIGHT: full sun to partial shade.
FOLIAGE: deciduous, but closer to being evergreen than most Oaks.
FLOWERS: with the leaves in Spring.
FRUIT: ripening September-October.
BARK/BRANCHES: gray to light brown.
SPACING: 20-40 feet.
PROPAGATION: by seed.
WILDLIFE VALUE: acorns for mammals and birds.

TRADE AVAILABILITY: good.
COMMENTS: Often a host for Mistletoe.



MEDIUM TO SMALL TREES

PREFERRED HABITAT: moist woodlands, banks of streams.
USUAL SIZE: often 15-25 feet, can reach 70 feet or more, up to 1-2 foot trunk diameter.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, acidic.
LIGHT: shade to full sun.
FOLIAGE: 2-4 inch classic holly-shaped leaves with spines, evergreen.
FLOWERS: white to yellowish, spring-summer.
FRUIT: red drupes, only on female plants, ¼ to ½ inch, late fall-winter.
BARK/BRANCHES: pyramidal crown, light or gray bark.
SPACING: 20 feet.
PROPAGATION: seed or cuttings.
WILDLIFE VALUE: seed for birds. Valuable due to duration of seeds on trees.
TRADE AVAILABILITY: poor for species, but good for hybrids.
COMMENTS: The Topel Holly is a naturally occurring hybrid of American Holly and Dahoon Holly (far Southeastern U.S.). It is readily available in the nursery trade as the Savannah, Foster's, and East Palatka Hollies.



PREFERRED HABITAT: moist forests.
USUAL SIZE: 80-100 feet, can reach 150 feet, 3-5 foot trunk diameter.
BAYOU SITE: top bank.
SOIL TYPE: sand, loam, clay.
LIGHT: full sun to partial shade.
FOLIAGE: deciduous, leaves turn red in fall, 5-9 inches long, multiple round leaf lobes,

dead leaves in winter stay on the tree for a long time.
FLOWERS: April-May, yellow green catkins.
FRUIT: acorns in September-October, ¾-1 inch long.
BARK/BRANCHES: bark is off white, light gray or reddish brown.
SPACING: 50-75 feet.
PROPAGATION: fresh acorns.
WILDLIFE VALUE: acorns for deer, birds, good cover, twigs for nesting, foliage for butterfly larvae.
TRADE AVAILABILITY: fair to good.
COMMENTS: This stately tree is becoming less common in southeast Texas due to habitat loss. The White Oak family is somewhat resistant to oak wilt. Slow to medium growth rate.



PREFERRED HABITAT: well drained areas of stream corridors.
USUAL SIZE: 20-30 feet, sometimes reaches 45 feet.
BAYOU SITE: upper slope, top bank.
SOIL TYPE: well drained sand, clay, caliche.
LIGHT: partial shade to full sun.
FOLIAGE: nearly evergreen leaves feel like sandpaper.
FLOWERS: white blooms in March and occasionally to November.
FRUIT: edible, sweet, yellow orange ¼ inch drupe.
BARK/BRANCHES: reddish brown to gray or black.
SPACING: 20 feet.
PROPAGATION: seed or cuttings.
WILDLIFE VALUE: fruit is eaten by mammals and birds. Insects are also attracted to its flowers.
TRADE AVAILABILITY: poor.
COMMENTS: This tree is rare in the Houston area, but commonly found west and southwest of here. It is often used like a Live Oak.



PREFERRED HABITAT: along streams, bayous.
USUAL SIZE: 25-40 feet tall, can reach 75 feet; trunk, 2 to 4 feet in diameter.
BAYOU SITE: toe, lower slope.
SOIL TYPE: moist soils, sandy loam, clay loam.
LIGHT: partial shade to full sun.

FOLIAGE: bright green leaves, deciduous, looks a bit like Poison Ivy.
FLOWERS: March-May, greenish, drooping clusters.

FRUIT: August-October in clusters, reddish brown, winged.

BARK/BRANCHES: green bark when immature, gray-brown when mature, ridged, bushy crown.

SPACING: 20-25 feet.

PROPAGATION: cuttings, by seed.

WILDLIFE VALUE: seeds for birds and squirrels.

TRADE AVAILABILITY: poor.

COMMENTS: A fast growing, resourceful, but short-lived tree likely to colonize lower banks. Shrubby growth in early years. Has medium depth, spreading roots and tolerates flooding and soil deposition well.



PREFERRED HABITAT: moist woods, thickets.
USUAL SIZE: 15-25 feet, sometimes 30 feet.

BAYOU SITE: top bank, upper slope.

SOIL TYPE: sand, loam, clay.

LIGHT: shade to partial shade.

FOLIAGE: deciduous to semi-evergreen, 3-6 inches long, oval, dark, glossy,

yellow fall color.

FLOWERS: white drooping blooms (panicles), March to June, 4-8 inch fringe-like clusters.

FRUIT: August-October, dark blue clusters of fruit (drupes) in late summer or fall on females.

BARK/BRANCHES: often multi-trunked, pale gray with white bands.

SPACING: 15-20 feet.

PROPAGATION: budding, cuttings, layering, stratified seed.

WILDLIFE VALUE: seeds for birds, foliage for mammals.

TRADE AVAILABILITY: fair to poor.

COMMENTS: An absolutely beautiful tree when in bloom. Lush, coarse textured leaves are very attractive. Has a taproot.



PREFERRED HABITAT: forests.

USUAL SIZE: 10-20 feet, sometimes 40 feet.

BAYOU SITE: top bank.

SOIL TYPE: sand, loam, clay, well-drained.

LIGHT: dappled shade to moderate sun.

FOLIAGE: dull green, heart shaped leaves, deciduous, yellow fall color.

FLOWERS: early spring bloom, rose-pink (rarely white, edible).

FRUIT: legume, with small seeds, ripen summer-fall.

BARK/BRANCHES: reddish-brown bark, trunk is often almost straight, with a rounded or flattened crown.

SPACING: 15-25 feet.

PROPAGATION: by seed, a prolific self seeder.

WILDLIFE VALUE: foliage is a butterfly larvae food source.

TRADE AVAILABILITY: fair to good.

COMMENTS: An attractive understory tree. Will not tolerate routinely wet, compact soils. A relatively short-lived tree.



PREFERRED HABITAT: coastal prairies and edges of woods.

USUAL SIZE: 15-20 feet, can reach 30 feet.

BAYOU SITE: top bank, upper slope.

SOIL TYPE: sand, loam, clay, caliche.

LIGHT: full sun, partial shade.

FOLIAGE: deciduous, pinnately compound, 1-4 inches long.

FLOWERS: orange-yellow ¼ inch fragrant, before new leaves in spring.

FRUIT: legume, reddish-brown to purple or black, seeds brown.

BARK/BRANCHES: reddish brown.

SPACING: 15-20 feet.

PROPAGATION: seeds, cuttings.

WILDLIFE VALUE: flowers for insects, cover.

TRADE AVAILABILITY: poor to fair.

COMMENTS: It is resistant to drought and heat. It can be an invasive in cleared areas.



PREFERRED HABITAT: woodlands.

USUAL SIZE: 15-40 feet.

BAYOU SITE: top bank.

SOIL TYPE: sand, loam.

LIGHT: part shade.

FOLIAGE: deciduous, with red fall color.

FLOWERS: white blooms in spring.

FRUIT: red berries in fall and winter.

BARK/BRANCHES: grayish brown.

SPACING: 10 feet.

PROPAGATION: seed, cuttings.

WILDLIFE VALUE: birds and mammals eat the fruit.

TRADE AVAILABILITY: fair.

COMMENTS: This native is rare in our area and can be particular about drainage and other site conditions.



PREFERRED HABITAT: rich woods, bottomlands.

USUAL SIZE: 15-25 feet.

BAYOU SITE: top bank, upper slope.

SOIL TYPE: sand, loam, clay, well drained.

LIGHT: shade to partial shade.

FOLIAGE: deciduous, 2-4 inches long, yellow fall color.

FLOWERS: April-June, in catkins.

FRUIT: ribbed nutlet, late

August-October.

BARK/BRANCHES: branches, drooping, graceful. Trunk with muscle-like patterns.

SPACING: 12-15 feet.

PROPAGATION: fresh seed.

WILDLIFE VALUE: seeds for birds, cover.

TRADE AVAILABILITY: fair to poor.

COMMENTS: This tree is very tough, has unique bark and fall color.



PREFERRED HABITAT: tall grass prairies, woods.
USUAL SIZE: 15-30 feet.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay-loam, well-drained.
LIGHT: dappled shade to moderate sun.
FOLIAGE: deciduous, light green, 2 ½-4 inches long, turning yellow in fall.
FLOWERS: early spring before leaves, white to faintly pink, 1 inch across,

fragrant, ornamental.

FRUIT: reddish purple drupes, ripens in mid-summer to fall, good for jelly.

BARK/BRANCHES: bark is gray with burgundy and fissured.

PROPAGATION: stratified seed, cuttings.

WILDLIFE VALUE: fruit for birds and mammals, foliage for butterfly larvae, rotting fruit for butterflies.

TRADE AVAILABILITY: good.

COMMENTS: A tough tree when placed in well-drained soils.



PREFERRED HABITAT: open woods, brush.
USUAL SIZE: 12-15 feet, sometimes to 35 ft.
BAYOU SITE: top bank, slopes.
SOIL TYPE: sand, loam, clay, caliche.
LIGHT: partial shade to full sun.
FOLIAGE: deciduous.
FLOWERS: yellow blooms, spring to fall.
FRUIT: linear legume.
BARK/BRANCHES: lime green, to brownish red.
SPACING: 12-15 feet.
PROPAGATION: seed and cuttings.
WILDLIFE VALUE: nectar for insects.

TRADE AVAILABILITY: good.

COMMENTS: This out of range Texas native is firmly established here and is very useful for dry slopes.



PREFERRED HABITAT: understory tree in woods, along streams, near swamps.
USUAL SIZE: 15-25 feet; rarely reaches up to 70 feet, up to 3 foot trunk diameter.
BAYOU SITE: top bank, lower slope, toe.
SOIL TYPE: rich sandy loam.
LIGHT: shade to partial shade.
FOLIAGE: evergreen, 3-4 inches long, two inches wide, shiny, aromatic.
FLOWERS: pale yellow, tiny, bell shaped, spring-summer.

FRUIT: ½ inch blue-black drupe.

SPACING: 20-25 feet.

PROPAGATION: by seed.

WILDLIFE VALUE: fruit for birds, foliage for butterfly larvae.

TRADE AVAILABILITY: poor to fair.

COMMENTS: Likes wet soils. Can form thickets. Moderately deep, spreading roots.

OTHER BAYS: Swamp Bay – *Persea palustris*.



PREFERRED HABITAT: thin or open woods.
USUAL SIZE: 20 feet, can reach 90 feet.
BAYOU SITE: top bank.
SOIL TYPE: sand, loam, acidic.
LIGHT: partial shade to full sun.
FOLIAGE: deciduous, with red, yellow, and orange fall color, aromatic.
FLOWERS: yellow, 2 inch clusters in early spring.
FRUIT: blue, ½ inch long.

BARK/BRANCHES: reddish brown to gray, aromatic.

SPACING: 10-15 feet apart.

PROPAGATION: seed, cuttings.

WILDLIFE VALUE: birds eat the fruit.

TRADE AVAILABILITY: poor.

COMMENTS: The oil and leaves are used as a flavoring.



PREFERRED HABITAT: moist woods, floodplains.
USUAL SIZE: often to 40 feet, rarely to 70 feet.
BAYOU SITE: top bank, upper slope, mid slope.
SOIL TYPE: moist soil, sandy loam, clay loam.
LIGHT: partial shade to full sun.
FOLIAGE: 3-9 inches long, often oval, serrate, some with lobes, yellow fall color.
FLOWERS: spring, green, catkins.
FLOWERS: May to August, ¾-1 inch long drupes, red at first, then purplish

black, edible.

BARK/BRANCHES: spreading crown, brown to gray bark.

SPACING: 25-30 feet.

PROPAGATION: cuttings, by seed, a prolific self-seeder.

WILDLIFE VALUE: fruit for birds and mammals, foliage for mammals.

TRADE AVAILABILITY: poor.

COMMENTS: A resourceful, fast growing, tough accent tree for wildlife. Many non-native Mulberry trees are erroneously sold as Red Mulberry. It is recommended to check botanical descriptions before planting this species.



PREFERRED HABITAT: woods, swamps, boggy streams.
USUAL SIZE: 20-30 feet, rarely to 60 feet, trunk up to 1-1 ½ feet in diameter.
BAYOU SITE: top bank.
SOIL TYPE: sandy loam, clay loam.
LIGHT: partial shade to partial sun.
FOLIAGE: almost evergreen, 3-6 inches long, light green leaves.
FLOWERS: May and June bloom, white 2-3 inches in diameter, lemon fragrance, ornamental.

FRUIT: 1-2 inch long cylindrical cone with red seeds in the fall.

BARK/BRANCHES: light gray-brown bark, narrow crown.

SPACING: 20 feet.

PROPAGATION: by seed, cuttings.

WILDLIFE VALUE: leaves for deer, seeds for birds and mammals.

TRADE AVAILABILITY: fair to poor.

COMMENTS: Can be a good choice when a smaller Magnolia is desired along a bayou corridor. Can be thicket forming. Slow growing.



PREFERRED HABITAT: moist woods, stream banks, bottomlands.
USUAL SIZE: 15-25 feet tall, 3-12 inch trunk diameter.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, acidic.
LIGHT: shade to partial shade.
FOLIAGE: deciduous, three to four inches long, yellow fall color.

FLOWERS: early-mid spring flowers, white, 1-inch bell shaped, very ornamental.

FRUIT: 1 ½-2-inch drupe with wings.

BARK/BRANCHES: slender, brittle branches, small rounded crown. Reddish brown to gray bark with fissures.

SPACING: 15-20 feet.

PROPAGATION: seed or cuttings.

WILDLIFE VALUE: fruit for mammals.

TRADE AVAILABILITY: fair to poor.

COMMENTS: An extremely beautiful tree when in bloom. Use in small numbers. Plant in fall or winter for best chances of survival.



PREFERRED HABITAT: moist woods, along streams.
USUAL SIZE: often 5-15 feet, can reach 20 feet.

BAYOU SITE: top bank, upper slope.

SOIL TYPE: sandy loam, well drained, with high organic matter content.

LIGHT: shade to partial shade.

FOLIAGE: deciduous, medium texture, red fall color.

FLOWERS: June-August, small white flowers.

FRUIT: August-November, bluish-black drupe.

BARK/BRANCHES: gray to grayish-brown bark.

SPACING: 6-12 feet.

PROPAGATION: by seed, cuttings.

WILDLIFE VALUE: fruit for birds.

TRADE AVAILABILITY: fair.

COMMENTS: This shrub is a tough competitor along bayou corridors.



PREFERRED HABITAT: woods.

USUAL SIZE: 10-15 feet.

BAYOU SITE: top bank.

SOIL TYPE: sand, loam, clay.

LIGHT: partial shade.

FOLIAGE: deciduous, with great fall color.

FLOWERS: yellow, 1 inch flowers in fall and winter.

FRUIT: woody capsule with shiny black seeds.

BARK/BRANCHES: brown, smooth

when immature, scaly when mature.

SPACING: 8-10 feet.

PROPAGATION: stratified seed, layering.

WILDLIFE VALUE: birds eat the fruits.

TRADE AVAILABILITY: poor.

COMMENTS: This is the source for the Witch Hazel medicinal extracts.



PREFERRED HABITAT: sluggish streams, wetlands.

USUAL SIZE: up to 30 feet.

BAYOU SITE: toe.

SOIL TYPE: moist soils, sandy loam.

LIGHT: full sun-partial shade.

FOLIAGE: deciduous, dark green, 2-8 inches long, 1-3 inches wide.

FLOWERS: June-September, white to

yellowish, in button-shaped heads, 1-2 inch diameter, fragrant.

FRUIT: September-October, cluster of reddish brown nutlets, ¼ inch diameter.

BARK/BRANCHES: gray-brown bark, upright growth habit.

SPACING: 10-15 feet.

PROPAGATION: seed, cuttings, root division.

WILDLIFE VALUE: seeds for birds, nectar for butterflies, bees.

TRADE AVAILABILITY: fair.

COMMENTS: Fast growing. Needs routine moisture. Striking large shrub to small tree.

SHRUBS



PREFERRED HABITAT: moist thickets, rich bottomlands.

USUAL SIZE: 4-5 feet.

BAYOU SITE: top bank, upper slope.

SOIL TYPE: sand, loam, clay, well drained.

LIGHT: dappled shade to partial shade.

FOLIAGE: deciduous, light green, 3-6 inches long, coarse textured.

FLOWERS: June-November, small, white rosy pink flowers in clusters.
FRUIT: late summer-fall, purple, white or pink, ¼ inch berry-like drupes in clusters.

BARK/BRANCHES: grayish bark, arching branches.

SPACING: 5-7 feet.

PROPAGATION: seeds in the fall, cuttings.

WILDLIFE VALUE: fruit valuable to birds.

TRADE AVAILABILITY: fair to good.

COMMENTS: This shrub will not tolerate continuously soggy areas. It should be considered a staple shrub, where site conditions are favorable. The variety *Callicarpa americana* var. *lactea* has white fruit. A fairly prolific self-seeder.



PREFERRED HABITAT: woods, bottomlands, along streams.

USUAL SIZE: 12-15 feet, sometimes up to 35 feet, trunk to eight inches.

BAYOU SITE: top bank.

SOIL TYPE: sand, loam, clay, tolerates somewhat poorly draining soils.

LIGHT: dappled shade to moderate sun.

FOLIAGE: deciduous to almost evergreen, dark green, yellow fall color, 2-6 inch leaves, shiny, prominent veins, ornamental.

FLOWERS: May-June, small greenish yellow.

FRUIT: fall, red to black drupe, 1/4-1/2 inch, clusters along stem, ornamental.

BARK/BRANCHES: smooth bark, brown-gray, open crown.

SPACING: 15-20 feet.

PROPAGATION: by seed.

WILDLIFE VALUE: foliage for deer, fruit for birds.

TRADE AVAILABILITY: fair to poor.

COMMENTS: Moderate growth rate. Has a spreading, fairly shallow root system.



PREFERRED HABITAT: forests, thickets, along streams.
USUAL SIZE: 15-20 feet.
BAYOU SITE: top bank, mid to upper slope.
SOIL TYPE: sand, loam, clay-loam, well drained.
LIGHT: shade to full sun.
FOLIAGE: evergreen, dark green, shiny, 2-4 inch leaves, aromatic.

FLOWERS: February-April, white, up to ½ inch.
FRUIT: April-October. ½ inch, black drupe.
BARK/BRANCHES: gray, smooth until mature, mottled.
SPACING: 8-15 feet.
PROPAGATION: stratified seed, cuttings.
WILDLIFE VALUE: fruit for birds, foliage for butterfly larvae.
TRADE AVAILABILITY: good.
COMMENTS: This shrub to tree will reseed itself persistently. It is important to have deep, well drained soils to ensure establishment success and to prevent loss due to root rot in later years. A staple shrub or tree, often taken for granted.



PREFERRED HABITAT: along streams and as a ground cover under Post Oaks.
USUAL SIZE: 1 ½ feet, can reach 6 feet.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay.
LIGHT: part shade.
FOLIAGE: almost evergreen, light green leaves.
FLOWERS: greenish white, June-August.
FRUIT: clusters of 1/8 inch purple berries.

BARK/BRANCHES: brown to gray.
SPACING: 1 ½ feet apart.
PROPAGATION: cuttings.
WILDLIFE VALUE: fruit for birds and mammals, and browse for deer.
TRADE AVAILABILITY: fair.
COMMENTS: An excellent shrub for erosion control.



PREFERRED HABITAT: woods, brush.
USUAL SIZE: 2 feet, can reach 5 feet.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay, caliche.
LIGHT: partial shade.
FOLIAGE: deciduous to semi-evergreen.
FLOWERS: white, ever blooming.
FRUIT: red to green small peppers, April-November.
BARK/BRANCHES: green to light brown.
SPACING: 2 feet.

PROPAGATION: seed.
WILDLIFE VALUE: birds eat the fruits.
TRADE AVAILABILITY: good.
COMMENTS: This is one of the hottest peppers.



PREFERRED HABITAT: sandy pinelands and prairies.
USUAL SIZE: 2-6 feet.
BAYOU SITE: top bank.
SOIL TYPE: sand, loam, clay.
LIGHT: part shade to full sun.
FOLIAGE: evergreen.
FLOWERS: n/a.
FRUIT: pale blue, small, waxy berries.
BARK/BRANCHES: brownish.

SPACING: 2 feet.
PROPAGATION: seed or cuttings.
WILDLIFE VALUE: excellent cover and berries for birds.
TRADE AVAILABILITY: fair.
COMMENTS: This plant is also good for small hedges.



PREFERRED HABITAT: coastal plains and wooded areas.
USUAL SIZE: 6 feet, can reach 15-20 feet, trunk diameter to 10 inches.
BAYOU SITE: top bank, upper-mid slope.
SOIL TYPE: sand, loam, clay, well drained.
LIGHT: partial shade to full sun.
FOLIAGE: deciduous, light green, somewhat triangular, 3-6 inches long.

FLOWERS: April-June, red spikes, 8-12 inches.
FRUIT: 4-6 inches long, poisonous, bright red beans are produced in pea-like pods in autumn.
BARK/BRANCHES: branches smooth and green when young, reddish brown when mature, with thorns.
SPACING: 5-7 feet.
PROPAGATION: scarified seed, cuttings, root division.
WILDLIFE VALUE: nectar for hummingbirds.
TRADE AVAILABILITY: poor to fair.
COMMENTS: Unusual looking flowers, fruits, and leaves. These attributes make it a sought after accent plant. It will not tolerate continuously soggy locations.



PREFERRED HABITAT: along streams, moist woods.
USUAL SIZE: often 12-15 feet, can reach 30 feet.
BAYOU SITE: toe, slopes, top bank.
SOIL TYPE: moist soils, sandy loam, clay loam.
LIGHT: full sun-partial shade.
FOLIAGE: deciduous, bright green, 2-7 inches.
FLOWERS: May-July, white flower clusters (cymes).
FRUIT: July-September, purple black pome, 1/6-1/4 inch, edible when ripe only, and

should be made into jelly or wine. Unripe green fruit has small amounts of arsenic in it.
BARK/BRANCHES: herbaceous and woody branches, often green-red when young and gray-red when mature, rangy growth habit.
SPACING: 5-10 feet.
PROPAGATION: by seed, cuttings.
WILDLIFE VALUE: fruit for birds, mammals.
TRADE AVAILABILITY: fair to poor.
COMMENTS: Fast-growing. An aggressive self seeding pioneer capable of colonizing disturbed areas.



PREFERRED HABITAT: fields and woodlands.
USUAL SIZE: 15 feet, can reach 30 feet.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay, limestone.
LIGHT: dappled to full sun.
FOLIAGE: deciduous.
FLOWERS: pink drooping clusters in spring.
FRUIT: black strings of beads.
BARK/BRANCHES: gray to reddish brown.
SPACING: 10 feet apart.
PROPAGATION: scarified seed.

WILDLIFE VALUE: Ring Tailed Cats eat the fruits and the foliage is browsed by White Tailed Deer.
TRADE AVAILABILITY: fair.
COMMENTS: This Texas native has been found in counties adjacent to Harris County.



PREFERRED HABITAT: woods, bottomlands.
USUAL SIZE: to 30 feet.
BAYOU SITE: top bank, slopes.
SOIL TYPE: sand, loam, clay.
LIGHT: partial shade to full sun.
FOLIAGE: deciduous.
FLOWERS: white flowers in spring.
FRUIT: Pome in May, 1/2-3/4 inch, red when ripe.
BARK/BRANCHES: maroon-brown bark and brown to gray twigs.
SPACING: 10-15 feet.
PROPAGATION: by stratifies seed.
WILDLIFE VALUE: flowers provide nectar, and the fruit feeds mammals and birds.
TRADE AVAILABILITY: fair to poor.
COMMENTS: This is the source of the delicious May Haw Jelly.



PREFERRED HABITAT: along wooded streams, bottomlands.
USUAL SIZE: 12-15 feet, can reach 25 feet.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: moist acidic soils, sandy loam, well-drained.
LIGHT: partial shade.
FOLIAGE: semi-evergreen to

deciduous, dark green, 1-3 inches long, leathery, glossy above, fall color.
FLOWERS: bell-shaped, white or pinkish in spring.
FRUIT: blue to black berries, 1/4-3/8 inch in diameter, ripen in winter, many seeds.
BARK/BRANCHES: bark grayish to dark brown.
SPACING: 6-15 feet.
PROPAGATION: by seed, cuttings.
WILDLIFE VALUE: berries for birds, mammals.
TRADE AVAILABILITY: poor to fair.
COMMENTS: Attractive, accent understory shrub. Adequate drainage is important.



PREFERRED HABITAT: woods, along streams.
USUAL SIZE: 8-12 feet.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay.
LIGHT: part shade to full sun.
FOLIAGE: deciduous with yellow fall color.
FLOWERS: pink in late spring.
FRUIT: black fruit in fall and winter.

BARK/BRANCHES: gray to brown.
SPACING: 10 feet apart.
PROPAGATION: scarified seed.
WILDLIFE VALUE: nectar for insects, seeds eaten by a few species of animals, but poisonous to humans.
TRADE AVAILABILITY: fair.
COMMENTS: This plant is rare in the Houston area and is normally found farther out west.



PREFERRED HABITAT: banks of waterways.
USUAL SIZE: 10 feet, can reach 18 feet.
BAYOU SITE: top bank to toe line.
SOIL TYPE: sand, loam, clay.
LIGHT: part shade to full sun.
FOLIAGE: deciduous with pinnately compound leaves.
FLOWERS: purple 6-8 inch spikes, with orange anthers May-June.
FRUIT: 1/4-1/3 inch long legume.

BARK/BRANCHES: brown or gray.
SPACING: 7-15 feet apart.
PROPAGATION: seed or cuttings.
WILDLIFE VALUE: nectar source for insects, leaves are browsed by deer, and it is a larval host plant for butterflies.
TRADE AVAILABILITY: fair to poor.
COMMENTS: This underused plant is one of the most versatile species available and is excellent for erosion control.



PREFERRED HABITAT: wet woods, flood plains.
USUAL SIZE: 4-5 feet, sometimes 15-20 feet.
BAYOU SITE: toe, lower slope, top bank.
SOIL TYPE: sand, loam, clay, tolerates poor drainage.
LIGHT: shade to full sun.
FOLIAGE: evergreen, fan-like, 2-8 feet in diameter, clustered from the base, pale green.

FLOWERS: May-June, cream colored and borne erect, can reach eight feet.
FRUIT: fall, 1-6 ft. drooping clusters, 1/4 inch black drupes.
BARK/BRANCHES: stems and leaves arise fan-like from the crown.
SPACING: 4-6 feet.
PROPAGATION: by stratified seed.
WILDLIFE VALUE: cover, fruit for mammals.
TRADE AVAILABILITY: fair.
COMMENTS: A slow growing plant that can eventually colonize an area. An extremely tough plant in bottomland settings. Dense, spreading root system. Tolerates flooding well and is great for erosion control.



PREFERRED HABITAT: woods, bottomlands.
USUAL SIZE: 10-15 feet, sometimes 25 feet.
BAYOU SITE: top bank, lower slope.
SOIL TYPE: sand, loam, clay, tolerates poor drainage.
LIGHT: dappled shade to full sun.
FOLIAGE: parsley shaped leaves, deciduous, leaves turn red in fall.
FRUIT: March, white to pinkish, ornamental.

FLOWERS: ripening in fall, 1/3 inch red berries (pomes), ornamental.
BARK/BRANCHES: branches slender, gray-brown, thorny; bark smooth, peeling.
SPACING: 15-20 feet.
PROPAGATION: by stratified seed.
WILDLIFE VALUE: nesting site for birds, fruit for birds, leaves for butterfly larvae. Very valuable for wildlife.
TRADE AVAILABILITY: fair to poor.
COMMENTS: This understory shrub to small tree is very tolerant of poorly drained soils along bayou corridors. Has deep roots relative to it's size.



PREFERRED HABITAT: woods, along streams, bayous.
USUAL SIZE: 25-40 feet tall, can reach 75 feet; trunk, 2 to 4 feet in diameter.
BAYOU SITE: top bank.
SOIL TYPE: sand, loam, clay, well-drained.
LIGHT: shade to partial shade.
FOLIAGE: deciduous, palmate, 3-6

inches long, thin dark green shiny leaves, often defoliates in summer.
FLOWERS: March-May, clusters, 3/4-1 inch red tubular individual flowers, ornamental.
FRUIT: 1-2 inch rounded capsules.
BARK/BRANCHES: thin, gray to brown, smooth. Branches usually short, crooked and upright.
SPACING: 10-15 feet.
PROPAGATION: fresh seed, dormant root cuttings.
WILDLIFE VALUE: nectar for hummingbirds.
TRADE AVAILABILITY: fair to poor.
COMMENTS: An understory shrub to small tree with attractive foliage and flowers. Very tough when sited well.



PREFERRED HABITAT: woodlands, banks of streams.
USUAL SIZE: 12-30 feet.
BAYOU SITE: woodlands, banks of streams.
SOIL TYPE: sand, loam, clay.
LIGHT: part shade to full sun.
FOLIAGE: deciduous with serrated leaf margins.
FLOWERS: small white flowers March-May.
FRUIT: red berries in fall and winter.

BARK/BRANCHES: mottled gray to brown.
SPACING: 12-15 feet.
PROPAGATION: seed or cuttings.
WILDLIFE VALUE: birds eat the berries, and it is also good cover.
TRADE AVAILABILITY: fair.
COMMENTS: This great plant should be used more often in landscapes.



PREFERRED HABITAT: thickets, along streams.
USUAL SIZE: 20 to 30 feet tall.
BAYOU SITE: top bank, upper slope, lower slope, sometimes the toe.
SOIL TYPE: moist soils, sandy loam, clay loam.
LIGHT: shade to moderate sun.
FOLIAGE: deciduous, often oval, 2-4 inches, dull green, rough texture, purplish fall color.

FLOWERS: May-August, yellowish white, clustered.
FRUIT: August-October, off white drupes about 1/8-1/4 inch wide, late fall.
BARK/BRANCHES: gray to reddish brown bark.
SPACING: 15-20 feet.
PROPAGATION: by seed, from cuttings.
WILDLIFE VALUE: fruit for birds.
TRADE AVAILABILITY: fair to poor.
COMMENTS: Not usually long lived. Grows suckers from spreading roots, a helpful tendency for erosion control. Can use for live stakes. Has a shrubby growth habit, handles heavier soils than *Cornus florida*, Flowering Dogwood.



PREFERRED HABITAT: forests, along streams, and boggy areas.
USUAL SIZE: 1-3 feet, can reach 6 feet or more.
BAYOU SITE: top bank.
SOIL TYPE: sand, loam.
LIGHT: partial shade.
FOLIAGE: deciduous, dull green leaves, good fall color.

FLOWERS: pink blooms in spring.
FRUIT: black to dark bluish-black berries.
BARK/BRANCHES: younger growth is green and the older branches are reddish brown or gray.
SPACING: 4-6 feet.
PROPAGATION: cuttings, seed.
WILDLIFE VALUE: fruit for birds and mammals, cover for wildlife.
TRADE AVAILABILITY: good for "improved" varieties.
COMMENTS: This is one of the species used for commercial blueberries. It is also one of the parent species for the hybrid; "Southern Highbush" Blueberries.



PREFERRED HABITAT: woods, edges of streams, river bottomlands.
USUAL SIZE: 10-20 feet, occasionally 30-40 feet, up to 1 1/2 trunk diameter.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: well-drained deep, loamy soils.
LIGHT: dappled shade to full sun.
FOLIAGE: 1 1/2-4 inches long, glossy, oval,

dark green, deciduous, with red and yellow fall colors.
FLOWERS: March-April, white in brilliant clusters, (cymes).
FRUIT: 1/2 inch blue-black drupes in hanging clusters, July-October.
BARK/BRANCHES: bark rough, fissured, dark brown to almost black, irregularly shaped branches, broad crown, usually single trunk.
SPACING: 15-20 feet.
PROPAGATION: by seeds, hardwood cuttings.
WILDLIFE VALUE: fruit for birds, foliage for butterfly larvae, nectar for butterflies and bees.
TRADE AVAILABILITY: fair.
COMMENTS: A beautiful shrub to small tree with outstanding wildlife value. Plant in small numbers at first, since it can be a bit tricky to find the ideal conditions. Slow-growing.



PREFERRED HABITAT: moist woods, openings, and edges.
USUAL SIZE: 8-20 feet, sometimes 30 feet.
BAYOU SITE: top bank.
SOIL TYPE: sand, loam, clay.
LIGHT: partial shade to full sun.
FOLIAGE: deciduous with outstanding fall color.
FLOWERS: white blooms in summer.
FRUIT: red, edible fruit in winter.

BARK/BRANCHES: brown to greenish.

SPACING: 10-15 feet.

PROPAGATION: seed or semi-hardwood cuttings.

WILDLIFE VALUE: fruit and cover for wildlife.

TRADE AVAILABILITY: fair.

COMMENTS: The fruit is edible and is made into a Pink Lemonade-like drink.



PREFERRED HABITAT: dry banks.
USUAL SIZE: 5-15 feet or more.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay.
LIGHT: full sun to partial shade.
FOLIAGE: deciduous, red fall color.
FLOWERS: white blooms in spring or summer.
FRUIT: red drupes in hairy clusters.
BARK/BRANCHES: brownish.
SPACING: 2-4 feet.

PROPAGATION: seed, or division.

WILDLIFE VALUE: fruit and cover for wildlife.

TRADE AVAILABILITY: poor.

COMMENTS: The fruit is eaten fresh or made into a Pink Lemonade drink, just like Shining Sumac.



PREFERRED HABITAT: fields, along streams, woodland edges.
USUAL SIZE: 2 feet or more, trailing.
BAYOU SITE: top bank, slopes.
SOIL TYPE: sand, loam, clay.
LIGHT: partial shade to moderate sun.
FOLIAGE: coarsely toothed, dormant in winter.

FLOWERS: March-April, white, 5 petaled.

FRUIT: black, up to 1 1/4 inch.

SPACING: 3-4 feet.

PROPAGATION: cuttings, ground layering.

WILDLIFE VALUE: fruit for birds, mammals.

TRADE AVAILABILITY: fair.

COMMENTS: This plant is outstanding for minimizing erosion.



PREFERRED HABITAT: woods, along streams, moist grasslands, upper edges of brackish marshes.
USUAL SIZE: often 10-15 feet, can reach 40 feet.
BAYOU SITE: top bank, slopes.
SOIL TYPE: sand, loam, clay.
LIGHT: part shade to full sun.
FOLIAGE: olive green, 1 1/2 -5 inches long, narrow, fragrant, evergreen.
FLOWERS: dioecious, yellow green, March-April.

FRUIT: 1/4 inch waxy bluish drupe in the fall.

Bark/branches: multi-trunked, dense branching patterns, light brown-grayish green, rounded crown.

SPACING: 10-15 feet.

PROPAGATION: by seeds, cuttings.

WILDLIFE VALUE: very valuable, cover, fruit for birds, leaves for butterfly larvae.

TRADE AVAILABILITY: very good.

COMMENTS: Should be a staple plant due to its tenacity, evergreen nature and wildlife value. Wax Myrtles also fix nitrogen and return it to the soil this plant does best in partial to full sun. Can colonize by suckering, a helpful tendency for erosion control. Handles salinity up to 3.5 ppt.



PREFERRED HABITAT: along forested streams, wetlands.
USUAL SIZE: 6-8 feet.
BAYOU SITE: top bank.
SOIL TYPE: sand, loam, clay.
LIGHT: shade to partial shade.
FOLIAGE: deciduous, 1-3 inches long, leaves turn red in the fall.
FLOWERS: May-June, greenish purple, inconspicuous.

FRUIT: fall and winter, red, 1 inch across, very unusual.

Bark/branches: stems green to light brown.

SPACING: 3-5 feet apart.

PROPAGATION: by seed in the fall.

WILDLIFE VALUE: fruit for birds.

TRADE AVAILABILITY: fair.

COMMENTS: This shrub has a nice vertical growth habit and is very attractive when turning fall colors and when producing fruit. Best planted in the fall to allow root establishment before the plant experiences its first summer.



PREFERRED HABITAT: swamps, along woodland streams.
USUAL SIZE: to 30 ft.
BAYOU SITE: top bank, slopes, toe.
SOIL TYPE: sand, loam, clay, poor drainage okay.
LIGHT: shade to full sun.
FOLIAGE: deciduous, elliptical or oblong-ovate leaves.
FLOWERS: green and yellow

flowers in spring.

FRUIT: purplish drupe.

BARK/BRANCHES: brown or grayish.

SPACING: 10-15 feet.

PROPAGATION: seed or cuttings.

WILDLIFE VALUE: fruit for ducks, other birds and mammals, and nectar for insects. Deer may browse the leaves.

TRADE AVAILABILITY: poor.

COMMENTS: This large shrub to small tree is good for erosion control and it can handle a variety of conditions.



PREFERRED HABITAT: swamps, along woodland streams.
USUAL SIZE: 4-5 feet, sometimes 10 feet, and 2-3 feet for dwarf cultivars.
BAYOU SITE: top bank, toe.
SOIL TYPE: sand, loam, clay, poor drainage okay.
LIGHT: dappled shade to part shade.
FOLIAGE: deciduous to semi-evergreen.

FLOWERS: April-May, white, 3-5 inch spires (racemes).

FRUIT: oblong capsule with small seeds in the fall.

BARK/BRANCHES: brown-gray bark, slender branches, elegant and draping growth habit.

SPACING: 4-5 feet apart.

PROPAGATION: by seed, cuttings.

WILDLIFE VALUE: wildlife cover and seed source for birds.

TRADE AVAILABILITY: fair to good.

COMMENTS: An extremely well adapted shrub for bayou corridors. Plant where moisture levels will be higher and avoid planting on steep slopes. If sited properly, it will usually colonize. A very attractive and useful shrub.



PREFERRED HABITAT: woods, thickets, upper edges of brackish marshes.

USUAL SIZE: 12-15 feet, sometimes 25 feet, up to 12 inch trunk diameter.

BAYOU SITE: top bank, slopes.

SOIL TYPE: sand, loam, clay, tolerates poor drainage.

LIGHT: shade to full sun.

FOLIAGE: evergreen, small, dark green.

FLOWERS: April-May, tiny, white.

FRUIT: red drupes on females in fall and winter.

BARK/BRANCHES: brown to gray bark, many stems from base, dense and rounded crown.

SPACING: 12-15 feet.

PROPAGATION: by seed, semi-hardwood cuttings.

WILDLIFE VALUE: shelter, butterfly larval food (leaves), fruit for birds. Very valuable to wildlife, with berries often present in the winter.

TRADE AVAILABILITY: good.

COMMENTS: Large specimens could be considered trees. Slow growing and stabilizes banks well. Density helps soften rainfall impact on soil. Handles any light condition and tolerates abuse well. Plant in fall or winter for best results. Cultivars of plant are available in the nursery trade.

SUCCULENTS



PREFERRED HABITAT: prairies.

USUAL SIZE: 3 feet, to 7 feet in bloom.

BAYOU SITE: top bank.

SOIL TYPE: dry, gravelly soils.

LIGHT: partial shade to full sun.

FOLIAGE: evergreen, with sharp points on the end of the leaves, bluish when mature.

FLOWERS: white blooms on a stalk from May to October.

FRUIT: dark brown capsule.

SPACING: 3-6 feet.

PROPAGATION: division of pups.

WILDLIFE VALUE: cover for small animals, nesting, flowers are eaten by a variety of wildlife.

TRADE AVAILABILITY: poor.

COMMENTS: This plant is often confused with Louisiana Yucca – *Yucca louisianensis*.



PREFERRED HABITAT: open woods, meadows.

USUAL SIZE: 1 foot without bloom stalk.

BAYOU SITE: top bank.

SOIL TYPE: sand, loam, clay.

LIGHT: partial shade to full sun.

FOLIAGE: succulent strap-like leaves to 16 inches long.

FLOWERS: greenish white, tubular flowers on a bloom stalk in May-August.

SPACING: 1 foot.

PROPAGATION: seed, division of offsets.

WILDLIFE VALUE: cover for small creatures, and nectar for insects.

TRADE AVAILABILITY: poor to fair.

COMMENTS: This plant was previously classified as *Agave virginica* and *Polianthes virginica*.



PREFERRED HABITAT: prairies, edges of woods, open areas.

USUAL SIZE: 2 to 3 feet, to 9 feet with blooming flower stalk.

BAYOU SITE: top bank.

SOIL TYPE: sandy soils.

LIGHT: full sun to partial shade.

FOLIAGE: green flexible leaves.

FLOWERS: greenish white flowers

on a large bloom stalk.

FRUIT: brown capsule.

SPACING: 3-6 feet.

PROPAGATION: division of pups.

WILDLIFE VALUE: cover, and the flowers are eaten by wildlife.

TRADE AVAILABILITY: poor.

COMMENTS: This species and the Arkansas Yucca are two of the smallest types of Yucca.



PREFERRED HABITAT: coastal to inland areas.

USUAL SIZE: 3-12 feet.

BAYOU SITE: top bank, upper slope.

SOIL TYPE: sand, loam, clay, caliche, well drained.

LIGHT: full sun to partial shade.

FOLIAGE: evergreen.

FLOWERS: yellow blooms in spring.

FRUIT: red to purple fruit in fall.

SPACING: 2-4 feet apart.

PROPAGATION: pads.

WILDLIFE VALUE: man and animals eat the fruit, and the pads, and the flowers attract insects.

TRADE AVAILABILITY: fair.

COMMENTS: Can be used on very dry slopes.



GRASSES

PREFERRED HABITAT: prairies, openings in woods.
USUAL SIZE: 3-6 feet tall.
BAYOU SITE: top bank.
SOIL TYPE: sand, loam, clay.
LIGHT: partial shade to full sun.
FOLIAGE: green with whitish waxy coating, dormant in winter.
FLOWERS: August-November.
SPACING: ½-2 lbs. pure live seed per

1000 square feet, or 2 feet apart for plants.

PROPAGATION: seed, root division while dormant.

WILDLIFE VALUE: forage grass, butterfly larval food source.

TRADE AVAILABILITY: fair to good.

COMMENTS: A tall perennial bunchgrass. Can colonize through rhizomes. Was once a dominant tall-grass prairie climax species.



PREFERRED HABITAT: prairies.
USUAL SIZE: 3-12 inches.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: loam, clay, caliche, well drained.
LIGHT: full sun to light shade.
FOLIAGE: dormant in winter and in drought.
FLOWERS: when not dormant.

SPACING: 2 lbs. seed per 1,000 square feet.

PROPAGATION: seed.

WILDLIFE VALUE: birds eat the seeds, cover for wildlife.

TRADE AVAILABILITY: good.

COMMENTS: Buffalo Grass is used as a lawn and a pasture grass. It is rare in the Houston area and needs very good drainage.



PREFERRED HABITAT: prairies, open woods.
USUAL SIZE: 2-5 feet.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay.
LIGHT: full sun to partial shade.
FOLIAGE: dormant in winter.
FLOWERS: Arranged in clusters along the flower stalks, and are surrounded by long, silky, white hairs, giving them a feathery appearance.

SPACING: 2 feet for plants.

PROPAGATION: seed.

WILDLIFE VALUE: food for deer, larval host plant for butterflies, seed for birds.

TRADE AVAILABILITY: fair.

COMMENTS: This species is often misidentified as Little Bluestem – *Schizachyrium scoparium*.



PREFERRED HABITAT: openings in forests and moist sandy areas.
USUAL SIZE: 8-20 inches (including seed heads).
BAYOU SITE: top bank, slopes.
SOIL TYPE: moist, sandy soils.
LIGHT: full sun to partial shade.
FOLIAGE: semi dormant in winter.
FLOWERS: The inflorescence has two to three racemes on a long, slender

stem. The spikelets are fuzzy and not more than 1/10 inch long.

SPACING: 5-10 lbs. per 1000 sq. ft. (less when used in seed mixes).

PROPAGATION: by seed.

WILDLIFE VALUE: forage.

TRADE AVAILABILITY: good.

COMMENTS: This grass is native to much of the Southern United States and is used for a lawn grass and for pastures. It has a higher shade tolerance than most turf type grasses. It is readily available in seed.



PREFERRED HABITAT: moist areas.
USUAL SIZE: 2-5 feet.
BAYOU SITE: toe, wet top bank.
SOIL TYPE: sand, loam, clay.
LIGHT: full sun.
FOLIAGE: dormant in winter.
FLOWERS: late summer to fall, white.
SPACING: 2 feet apart for plants, or 2 lbs. seed per 1,000 square feet.
PROPAGATION: seed.
WILDLIFE VALUE: seed for birds.

TRADE AVAILABILITY: poor.

COMMENTS: Excellent plant for the toe in sunny areas.



PREFERRED HABITAT: prairies, bottomlands, along brackish streams.
USUAL SIZE: 2-3 feet, sometimes 8-10 feet in large clumps.
BAYOU SITE: top bank, slopes.
SOIL TYPE: sand, loam, clay, moist.
LIGHT: partial shade to full sun.
FOLIAGE: dormant in winter.
FLOWERS: April-November.
SPACING: ½-2 lbs. pure live seed per 1000 sq. ft., or 3-4 feet apart for plants.

PROPAGATION: seed, root division when dormant, clumps by rhizomes.

WILDLIFE VALUE: butterfly larval food plant, cover, seeds for birds.

TRADE AVAILABILITY: fair.

COMMENTS: This large grass works well as an edge buffer plant.



SPACING: 6-10 feet.
PROPAGATION: root division.
WILDLIFE VALUE: cover and shoots.
TRADE AVAILABILITY: poor.
COMMENTS: This species can be very hard to find.

PREFERRED HABITAT: low areas, bayous, rivers, sloughs.
USUAL SIZE: to 30 feet, usually less.
BAYOU SITE: top bank, upper and mid slopes.
SOIL TYPE: sand, loam, clay.
LIGHT: shade to partial shade.
FOLIAGE: evergreen.
FLOWERS: panicles of flattened spikelets.



PROPAGATION: by seed, root division when dormant, clumps by rhizomes.
WILDLIFE VALUE: forage grass.
TRADE AVAILABILITY: fair.
COMMENTS: A good companion to Little Bluestem, Big Bluestem, and Switchgrass.

PREFERRED HABITAT: prairies.
USUAL SIZE: up to 6 feet.
BAYOU SITE: top bank.
SOIL TYPE: sand, loam, clay, tolerates poor drainage.
LIGHT: full sun to partial shade.
FOLIAGE: dormant in winter.
FLOWERS: fall.
SPACING: ½ - 2 lbs pure live seed per 1000 square feet, or 3-5 feet apart for plants.



SPACING: ½ - 2lbs. pure live seed per 1000 square feet, or two feet apart for plants.
PROPAGATION: by seed.
WILDLIFE VALUE: nesting cover.
TRADE AVAILABILITY: fair to good.
COMMENTS: Stunning color in the fall when blooming. A good foundation plant prairie component.

PREFERRED HABITAT: well drained prairies, openings in woods.
USUAL SIZE: 1 ½ feet, sometimes 4 feet.
BAYOU SITE: top bank.
SOIL TYPE: sand, loam, clay-loam.
LIGHT: partial shade to full sun.
FOLIAGE: dormant in winter.
FLOWERS: usually in mid-October, deep pink.



FLOWERS: reddish brown clusters of spikelets.
SPACING: 4-6 feet.
PROPAGATION: seed, transplants.
WILDLIFE VALUE: birds eat the seeds.
TRADE AVAILABILITY: fair.
COMMENTS: Can form dense colonies. The saw toothed margins of this grass can give "paper cuts", so direct contact should be avoided.

PREFERRED HABITAT: margins of streams, lakes, fresh water to slightly brackish marshes.
USUAL SIZE: 4-8 feet.
BAYOU SITE: toe, wet top banks.
SOIL TYPE: sand, loam, clay, moist, or slightly elevated, well drained.
LIGHT: full sun to partial shade.
FOLIAGE: long, stiff, leaves with saw toothed margins.



FOLIAGE: dormant in winter or winter rosette.
FLOWERS: flowers in the summer and fall.
SPACING: ½-2 lbs. pure live seed per 1000 square feet, or 1 foot apart for 1 containerized plants.
PROPAGATION: seed, root division.
WILDLIFE VALUE: cover for ground dwellers, seeds for birds, a forage grass.
TRADE AVAILABILITY: fair.
COMMENTS: A very tough grass for wet shady locations. Can be moderately aggressive. It has seed heads that resemble Oats. Great for erosion control.

PREFERRED HABITAT: creek bottoms, moist woods.
USUAL SIZE: 2-4 feet.
BAYOU SITE: top bank, upper slope, lower slope.
SOIL TYPE: sand, loam, clay, tolerates poor drainage.
LIGHT: shade to partial shade.



SPACING: ½ - 2 lbs pure live seed per 1000 square feet or 1 ½ feet apart for plants.
PROPAGATION: seed, root division.
WILDLIFE VALUE: butterfly larval food plant, cover.
TRADE AVAILABILITY: fair to good.
COMMENTS: A relatively low growing foundation prairie bunchgrass.

PREFERRED HABITAT: prairies, open areas.
USUAL SIZE: 1-2 feet, sometimes 5 feet.
BAYOU SITE: top bank.
SOIL TYPE: sand, loam, clay.
LIGHT: partial shade to full sun.
FOLIAGE: light blue and dormant in winter.
FLOWERS: fall.



PREFERRED HABITAT: marshes, prairies, fresh and saltwater habitats.
USUAL SIZE: 5-7 feet.
BAYOU SITE: toe, wet top banks.
SOIL TYPE: sand, loam, clay, some saline ok.
LIGHT: full sun to partial shade.
FOLIAGE: dormant in winter.
FLOWERS:
SPACING: 2 feet apart for plants.

PROPAGATION: seed, root division.
WILDLIFE VALUE: seeds and cover for wildlife.
TRADE AVAILABILITY: poor.
COMMENTS: The strong roots are very capable of holding banks together.



PREFERRED HABITAT: open woods, prairies.
USUAL SIZE: 2-5 feet.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay.
LIGHT: full sun to partial shade.
FOLIAGE: perennial with wide leaf blades.
FLOWERS: the seedhead is an open panicle that is dark purple in color.

SPACING: 2-3 feet for plants, or 1 lb per 4000 sq. ft.
PROPAGATION: seed.
WILDLIFE VALUE: forage, larval host for butterflies.
TRADE AVAILABILITY: fair.
COMMENTS: The purple seedheads can be very attractive in large stands.



PREFERRED HABITAT: prairies, meadows.
USUAL SIZE: 10-20 inches.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay, caliche.
LIGHT: full sun to partial shade.
FOLIAGE: dormant in winter.
FLOWERS: attractive purple tinted awns.
SPACING: 4lbs seed per acre.
PROPAGATION: seed.
WILDLIFE VALUE: cover.

TRADE AVAILABILITY: fair.
COMMENTS: Rare in the Houston area.



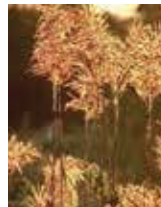
PREFERRED HABITAT: prairies, meadows, openings in woods.
USUAL SIZE: 2-3 feet, can reach 6 feet.
BAYOU SITE: top bank, slopes.
SOIL TYPE: sand, loam, clay.
LIGHT: full sun to partial shade.
FOLIAGE: dormant in winter.
SPACING: 1-2 feet.
PROPAGATION: seed.

WILDLIFE VALUE: seeds for birds.
TRADE AVAILABILITY: fair.
COMMENTS: This is the state grass of Texas. The seed heads are all on one side of the stem.



PREFERRED HABITAT: brackish to saline rivers, bayous and marshes.
USUAL SIZE: up to 6 feet.
BAYOU SITE: toe, water's edge.
SOIL TYPE: wet, saline.
LIGHT: full sun.
FOLIAGE: dormant in winter.
FLOWERS: July-November.
SPACING: 2-3 feet.
PROPAGATION: seed, division.

WILDLIFE VALUE: fish habitat, food for geese.
TRADE AVAILABILITY: fair.
COMMENTS: A staple grass for saline and brackish areas.



PREFERRED HABITAT: edges of wetlands, along creeks.
USUAL SIZE: 6 feet, can reach 10 feet.
BAYOU SITE: toe, top bank.
SOIL TYPE: sand, loam, clay, moist.
LIGHT: sun-partial shade.
FOLIAGE: dormant in winter.
FLOWERS: October, reddish, 6-10 inch heads.
SPACING: 2-4 feet for plants.
PROPAGATION: by seed, root division.

WILDLIFE VALUE: cover, seed for birds.
TRADE AVAILABILITY: fair.
COMMENTS: A densely bunched perennial grass tolerant of poor drainage.



PREFERRED HABITAT: moist open places, slightly brackish marshes, wet prairies.
USUAL SIZE: 3 feet, sometimes 6 feet.
BAYOU SITE: toe, top bank (if routinely moist).
SOIL TYPE: sand, loam, clay, tolerates poor drainage.
LIGHT: partial shade to full sun.
FOLIAGE: dormant in winter.
FLOWERS: fall flowers.

SPACING: 1/2 lbs. pure live seed per 1000 square feet, or 3 feet apart for plants.

PROPAGATION: seed, root division while dormant.

WILDLIFE VALUE: cover, seeds for birds, butterfly larval food plant.

TRADE AVAILABILITY: fair.

COMMENTS: A coarse bunchgrass for moist, erosion prone areas. Was once a dominant tall-grass prairie component in lowland prairies.



PREFERRED HABITAT: bottomlands.
USUAL SIZE: 1-2 feet.
BAYOU SITE: top banks, slopes.
SOIL TYPE: sand, loam, clay, caliche, usually calcareous soils.
LIGHT: full sun to partial shade.
FOLIAGE: evergreen.
FLOWERS: twisted, 3 inch long awn, with a barb.
SPACING: 15 lbs. seed per acre.

PROPAGATION: seed.

WILDLIFE VALUE: spring forage and also a larval host plant for butterflies.

TRADE AVAILABILITY: poor.

COMMENTS: This grass is also known as Speargrass.



PREFERRED HABITAT: woods and streams.
USUAL SIZE: 16-31 inches.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay.
LIGHT: shade or sun.
FOLIAGE: dormant in summer.
FLOWERS: 3-6 inch long spike.
SPACING: 2-3 lbs. pure live seed per 1,000 sq. ft., or 1 foot apart for plants.
PROPAGATION: seed, and root division.

WILDLIFE VALUE: grain-like seeds for small mammals and birds.

TRADE AVAILABILITY: fair.

COMMENTS: This very shade tolerant, cool season grass is usually available in seed.

GROUNDCOVERS



PREFERRED HABITAT: prairies, open areas, edges of salt marshes, disturbed areas.
USUAL SIZE: 2-12 inches, creeping.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay.
LIGHT: full sun to partial shade.
FOLIAGE: dormant in winter.
FLOWERS: salmon colored flowers March-May.

SPACING: 6 inches to 1 foot.

PROPAGATION: cuttings, transplants.

WILDLIFE VALUE: cover for small creatures.

TRADE AVAILABILITY: poor.

COMMENTS: This is a member of the Mallow family, and it roots at the nodes.

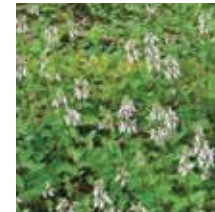


PREFERRED HABITAT: woodlands.
USUAL SIZE: 12-18 inches.
BAYOU SITE: top bank.
SOIL TYPE: sand, loam.
LIGHT: shade to partial shade.
FOLIAGE: evergreen, grass-like.
FLOWERS: April to June (seeds).
SPACING: 1 foot.
PROPAGATION: seed, division.
WILDLIFE VALUE: cover, animals

may eat the seeds.

TRADE AVAILABILITY: poor.

COMMENTS: An excellent shade loving groundcover.



PREFERRED HABITAT: woods, stream banks.
USUAL SIZE: 8-20 inches.
BAYOU SITE: top bank, slopes.
SOIL TYPE: sand, loam.
LIGHT: partial shade.
FOLIAGE: leaves are elliptic or ovate, normally with serrated edges.
FLOWERS: lavender flowers in spring and summer.
SPACING: 1 foot.
PROPAGATION: division, transplants.

WILDLIFE VALUE: nectar for insects.

TRADE AVAILABILITY: poor.

COMMENTS: The tubers are edible. This plant can be invasive, but it is good for shady slopes.



PREFERRED HABITAT: woods, prairies.
USUAL SIZE: 8-10 inches.
BAYOU SITE: top bank, slope.
SOIL TYPE: loam, clay, well-drained.
LIGHT: shade to partial shade.
FOLIAGE: evergreen to sometimes dormant.
FLOWERS: yellow blooms sporadically during warm seasons.

SPACING: 1-2 feet.

PROPAGATION: seed, root divisions.

WILDLIFE VALUE: cover for ground dwellers.

TRADE AVAILABILITY: poor.

COMMENTS: Although this plant is not commonly found in the nursery trade, it can be transplanted from existing populations, and it will spread if well adapted to the new site.



PREFERRED HABITAT: fields, open woods.
USUAL SIZE: trailing.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay.
LIGHT: partial shade to full sun.
FOLIAGE: evergreen.
FLOWERS: 1/8 inch white flowers.
SPACING: 6 inches to 1 foot.
PROPAGATION: division.
WILDLIFE VALUE: cover for small creatures.

TRADE AVAILABILITY: poor.

COMMENTS: This useful groundcover roots at the nodes.



PREFERRED HABITAT: woods.
USUAL SIZE: 2 inches.
BAYOU SITE: top bank.
SOIL TYPE: sand, loam, acidic.
LIGHT: shade to partial shade.
FOLIAGE: evergreen.
FLOWERS: white flowers, 1/4 inch, in summer.
FLOWERS: 1/2 inch red berries in winter.
SPACING: 9-12 inches.

PROPAGATION: root divisions.

WILDLIFE VALUE: fruit for birds and mammals.

TRADE AVAILABILITY: poor.

COMMENTS: Colonizes by stolons, spreads during wet periods.



PREFERRED HABITAT: prairies, fields, open areas in woods.
USUAL SIZE: trailing stems to 6 feet long.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay.
LIGHT: full sun to partial shade.
FOLIAGE: pinnae with leaflets.
FLOWERS: pink balls, April-November.
SPACING: 1 foot apart for plants.

PROPAGATION: seed.

WILDLIFE VALUE: leaves are eaten by deer.

TRADE AVAILABILITY: poor.

COMMENTS: The seed is very hard and requires scarification to germinate.



PREFERRED HABITAT: woods.
USUAL SIZE: 1-3 feet.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay.
LIGHT: partial shade.
FOLIAGE: evergreen to dormant in winter.
FLOWERS: pink and white flowers unless below freezing.
FLOWERS: red berries from spring to fall.
SPACING: 1 foot.

PROPAGATION: seed, cuttings.

WILDLIFE VALUE: birds eat the berries.

TRADE AVAILABILITY: fair.

COMMENTS: The berries and the flowers are on the plant at the same time.



PREFERRED HABITAT: gravelly slopes.
USUAL SIZE: 2-8 inches, mat forming.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sandy, gravelly soils.
LIGHT: full sun to partial shade.
FOLIAGE: strong annual, succulent leaves.
FLOWERS: hot pink blooms May-December.
SPACING: 1 foot.
PROPAGATION: division.

WILDLIFE VALUE: insects are attracted to the flowers.

TRADE AVAILABILITY: poor.

COMMENTS: This plant is very similar to the South American native, Moss Rose – *Portulaca grandiflora*.



PROPAGATION: root division.
WILDLIFE VALUE: nectar for insects.
TRADE AVAILABILITY: fair.
COMMENTS: Colonizes when well adapted.

PREFERRED HABITAT: fields, bayou banks.
USUAL SIZE: up to 1 ft.
BAYOU SITE: top bank.
SOIL TYPE: sand, loam, clay, caliche, limestone, saline ok.
LIGHT: shade to partial sun.
FOLIAGE: 2 inch toothed leaves.
FLOWERS: spring – fall, small white heads with yellow centers.
SPACING: 1-2 ft.



SPACING: 1 foot.
PROPAGATION: seed, division.
WILDLIFE VALUE: insects are attracted to the flowers and many animals eat the fruit.
TRADE AVAILABILITY: poor.
COMMENTS: This is one of the parents of the Garden Strawberry. People may confuse Wild Strawberry with the Indian Strawberry – *Duchesnea indica*, which is an invasive, exotic plant from India that has yellow flowers.

PREFERRED HABITAT: openings and edges of woods.
USUAL SIZE: 1 foot or less.
BAYOU SITE: top bank.
SOIL TYPE: sand, loam.
LIGHT: full sun to partial shade.
FOLIAGE: perennial with long stolons.
FLOWERS: white flowers late spring to early summer.
FLOWERS: sweet edible ½ to ¾ long berry.



PROPAGATION: division.
WILDLIFE VALUE: cover for small creatures.
TRADE AVAILABILITY: poor.
COMMENTS: This plant is normally thought of as a lawn weed, but it has great potential as a groundcover.

PREFERRED HABITAT: swamps, meadows, coastal prairies, along streams.
USUAL SIZE: creeping stems to 2 feet.
BAYOU SITE: top bank, slopes.
SOIL TYPE: sand, loam.
LIGHT: partial shade to full sun.
FOLIAGE: dormant in winter.
FLOWERS: white blooms May-October.
SPACING: 1 foot.

ANNUALS



SPACING: 1-2 feet.
PROPAGATION: seed.
WILDLIFE VALUE: nectar for insects and seeds for birds.
TRADE AVAILABILITY: good.
COMMENTS: This common plant is readily available in seed and in pots. Many cultivars exist.

PREFERRED HABITAT: prairies, open woodlands.
USUAL SIZE: 1-2 feet.
BAYOU SITE: top bank, slopes.
SOIL TYPE: sand, loam, clay.
LIGHT: sun-partial shade.
FOLIAGE: annual to short lived perennial with rough pubescent leaves.
FLOWERS: May or June, yellow with brown center.



SPACING: 9-12 inches.
PROPAGATION: root division, by seed
WILDLIFE VALUE: seeds for birds.
TRADE AVAILABILITY: fair.
COMMENTS: An attractive woodland groundcover, must have adequate moisture to survive.

PREFERRED HABITAT: woods.
USUAL SIZE: 2-6 inches.
BAYOU SITE: top bank.
SOIL TYPE: sand, loam, clay.
LIGHT: shade.
FOLIAGE: evergreen foliage, roundish leaves, purple undersides.
FLOWERS: purple, 1 inch flowers in spring.



SPACING: 6 inches to 1 foot.
PROPAGATION: seed.
WILDLIFE VALUE: bees and other insects forage on the nectar, and it is a host plant for Hairstreak and Elfin Butterflies.
TRADE AVAILABILITY: good.
COMMENTS: This legume is a great plant for sunny slopes and it mixes well with other low growing wildflowers and grasses.

PREFERRED HABITAT: prairies and meadows.
USUAL SIZE: 1 foot.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay, caliche.
LIGHT: full sun to light shade.
FOLIAGE: annual with palmately compound leaves, with 5 leaflets.
FLOWERS: blue, 2 to 4 inch spikes for 2-4 weeks in March and April.



PREFERRED HABITAT: moist prairies, meadows.
USUAL SIZE: 2 feet.
BAYOU SITE: top banks, upper and mid slopes.
SOIL TYPE: sand, loam, clay.
LIGHT: part shade to full sun.
FOLIAGE: annual.
FLOWERS: April-June, 2 inch, yellow with dark center.

SPACING: 2lbs seed per acre or 1 foot apart for plants.
PROPAGATION: seed.
WILDLIFE VALUE: nectar for insects.
TRADE AVAILABILITY: fair.
COMMENTS: A dependable, and easy to grow annual.



PREFERRED HABITAT: prairies, open areas.
USUAL SIZE: 1 foot.
BAYOU SITE: top bank, slopes.
SOIL TYPE: sand, loam, clay.
LIGHT: full sun to light shade.
FOLIAGE: thin, threadlike leaves.
FLOWERS: yellow blooms, February to December.
SPACING: 1 foot.
PROPAGATION: seed.

WILDLIFE VALUE: butterflies feed on the nectar.
TRADE AVAILABILITY: fair.
COMMENTS: This plant is normally available in seed.



PREFERRED HABITAT: prairies, meadows.
USUAL SIZE: 4-12 inches.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay.
LIGHT: full sun to part shade.
FOLIAGE: annual, lemon scented when crushed.
FLOWERS: yellow flowers from March to frost.

SPACING: 9-12 inches apart.
PROPAGATION: seed.
WILDLIFE VALUE: nectar for insects.
TRADE AVAILABILITY: good.
COMMENTS: This plant is available in seed and is also often found in nurseries in spring.



PREFERRED HABITAT: prairies, meadows, woodland openings.
USUAL SIZE: 1 foot.
BAYOU SITE: top bank, slopes.
SOIL TYPE: sand, loam, clay.
LIGHT: full sun to part shade.
FOLIAGE: annual.
FLOWERS: spring-fall, red, yellow, orange.
SPACING: 1 foot.

PROPAGATION: seed.
WILDLIFE VALUE: bees, butterflies, and other insects forage on the nectar.
TRADE AVAILABILITY: fair.
COMMENTS: Availability for the hybrid "Blanket Flower" – *Gaillardia* x *grandiflora* is good. This is *Gaillardia pulchella* mixed with *Gaillardia aristata*.



PREFERRED HABITAT: prairies and meadows.
USUAL SIZE: 6-12 inches, can reach 20 inches.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sandy soils.
LIGHT: partial shade to full sun.
FOLIAGE: annual.
FLOWERS: red, pink, lavender, peach, or white flowers in spring.
SPACING: 1 foot.

PROPAGATION: seed.
WILDLIFE VALUE: nectar for insects.
TRADE AVAILABILITY: good.
COMMENTS: Sometimes these plants are grown by nurseries for use as color in fall and winter.



PREFERRED HABITAT: prairies, meadows.
USUAL SIZE: 6-12 inches.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay.
LIGHT: full sun to partial shade.
FOLIAGE: annual.
FLOWERS: orange-red, 3-8 inch spikes from March to May.
SPACING: 6-12 inches.
PROPAGATION: seed.

WILDLIFE VALUE: insects and hummingbirds feed from the flowers.
TRADE AVAILABILITY: fair to good.
COMMENTS: This annual has been shown to do better mixed in with native grasses.



PREFERRED HABITAT: slopes, prairies, and meadows.
USUAL SIZE: 1-1 ½ feet.
BAYOU SITE: top bank, slopes.
SOIL TYPE: sand, loam, clay.
LIGHT: full sun to part shade.
FOLIAGE: annual with aromatic, lanceolate, oblong leaves.
FLOWERS: purple 6 inch spikes, April to June.
SPACING: 9 inches.

PROPAGATION: seed.
WILDLIFE VALUE: nectar for butterflies, bees, and many other insects.
TRADE AVAILABILITY: fair.
COMMENTS: This is a useful plant that can be made into teas with medicinal qualities.



PREFERRED HABITAT: fields and open woods.
USUAL SIZE: 1-3 feet.
BAYOU SITE: top bank, slopes.
SOIL TYPE: sand, loam, clay.
LIGHT: partial shade to full sun.
FOLIAGE: annual with 8-15 pairs of leaflets.
FLOWERS: yellow 1-2 inch blooms,

June-October.
SPACING: 1-2 feet, 20lbs seed per acre.
PROPAGATION: seed.
WILDLIFE VALUE: flowers attracts butterflies and bees. Seeds are eaten by birds. Larval host plant for butterflies.
TRADE AVAILABILITY: fair.
COMMENTS: This plant is usually available in seed only. It is a legume, so it has nitrogen fixing properties.



PREFERRED HABITAT: prairies, meadows.
USUAL SIZE: 1 ½ feet, can reach up to 4 feet.
BAYOU SITE: top bank, slopes.
SOIL TYPE: sand, loam, clay.
LIGHT: partial shade to full sun.
FOLIAGE: annual.
FLOWERS: 1 inch yellow and maroon

flowers in spring and early summer.
SPACING: 1 foot apart for plants and 2 lbs. seed per acre.
PROPAGATION: seed.
WILDLIFE VALUE: nectar for butterflies and other insects, and seeds for birds.
TRADE AVAILABILITY: fair.
COMMENTS: A red flowering variety of this plant can sometimes be found in nurseries.



PREFERRED HABITAT: prairies, meadows, open woods, disturbed areas.
USUAL SIZE: up to 10 feet.
BAYOU SITE: top bank, slopes.
SOIL TYPE: sand, loam, clay.
LIGHT: full sun.
FOLIAGE: annual, light green, 1 foot leaves.
FLOWERS: 1 ft. across, yellow petals surround a large seed head.
SPACING: 3-5 feet.

PROPAGATION: seed.
WILDLIFE VALUE: seeds for wildlife.
TRADE AVAILABILITY: good.
COMMENTS: This is the source of the commercial Sunflower seeds.



PREFERRED HABITAT: prairies, embankments.
USUAL SIZE: 1 ½-5 feet.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay.
LIGHT: partial shade to full sun.
FOLIAGE: annual with grayish-green, prickly leaves.
FLOWERS: white blooms from March to June.

SPACING: 1 foot.
PROPAGATION: seed.
WILDLIFE VALUE: insects forage on the pollen and nectar.
TRADE AVAILABILITY: fair.
COMMENTS: Deer dislike this plant because of the prickly leaves.

PERENNIALS



PREFERRED HABITAT: woody areas, edges of shady streams.
USUAL SIZE: 10 inches-3 feet.
BAYOU SITE: top bank, slopes.
SOIL TYPE: moist soils, sand, loam, clay, tolerates poor drainage.
LIGHT: shade to partial shade.
FOLIAGE: dormant in winter, up to 3 inches long.
FLOWERS: late summer-fall, violet-

purple, ¼ inch, clusters.
SPACING: 1-2 feet.
PROPAGATION: root division, seeds.
WILDLIFE VALUE: nectar source for butterflies.
TRADE AVAILABILITY: fair.
COMMENTS: It can re-seed itself prolifically. This plant will seem like it is coming and going due to its erratic nature. A pioneer plant.



PREFERRED HABITAT: prairies, meadows, edges of woods.
USUAL SIZE: 2-3 feet, can reach 8 feet.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay.
LIGHT: full sun to partial shade.
FOLIAGE: usually dormant in winter.
FLOWERS: white or rarely pink blooms, April to November.
SPACING: 2 feet apart.

PROPAGATION: seed.
WILDLIFE VALUE: nectar for insects.
TRADE AVAILABILITY: good.
COMMENTS: This plant is very popular and several white and pink cultivars exist.



PREFERRED HABITAT: prairies, meadows.
USUAL SIZE: to 3 feet.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay.
LIGHT: full sun to part shade.
FOLIAGE: evergreen, linear to lanceolate leaves.
FLOWERS: yellow blooms April to June.
SPACING: 1 foot.

PROPAGATION: seed or division.
WILDLIFE VALUE: nectar for butterflies and bees.
TRADE AVAILABILITY: good.
COMMENTS: This species is less drought tolerant than Lanceleaf Coreopsis – *Coreopsis lanceolata*.



PREFERRED HABITAT: along streams, wetlands.
USUAL SIZE: 2-4 feet tall.
BAYOU SITE: toe.
SOIL TYPE: moist, rich soils, sandy loam.
LIGHT: partial shade to partial sun.
FOLIAGE: 3-6 inches long, dark green, dormant in winter.
FLOWERS: August-October, tubular, red, individual flowers to 1 ½ inches long, around a twelve to twenty inch stalk.

SPACING: 1-2 feet.
PROPAGATION: by seed, ground layering.
WILDLIFE VALUE: nectar for hummingbirds.
TRADE AVAILABILITY: fair.
COMMENTS: Likely to naturalize along sluggish, shady bayou edges.



PREFERRED HABITAT: open areas and prairies.
USUAL SIZE: 8-16 inches.
BAYOU SITE: top bank, upper and mid-slopes.
SOIL TYPE: sand, loam, clay.
LIGHT: full sun to partial shade.
FOLIAGE: grass-like leaves.
FLOWERS: white flowers, intermittently, throughout the year.
SPACING: 1 foot.

PROPAGATION: seed, or transplants of bulbs.
WILDLIFE VALUE: nectar for insects.
TRADE AVAILABILITY: poor.
COMMENTS: This species is very common and is often considered to be a weed.



PREFERRED HABITAT: moist places along streams and prairies.
USUAL SIZE: 6-12 inches.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay.
LIGHT: partial shade to full sun.
FOLIAGE: grass-like leaves.
FLOWERS: yellow-orange, trumpet shaped flowers after rains.

SPACING: 6-12 inches.
PROPAGATION: seed, division.
WILDLIFE VALUE: flowers attract insects, but the plant can be poisonous to grazing animals.
TRADE AVAILABILITY: poor.
COMMENTS: This species also occurs in Argentina.



PREFERRED HABITAT: open woods, meadows.
USUAL SIZE:
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay.
LIGHT: partial shade to full sun.
FOLIAGE: evergreen, narrow-linear, gray green to glaucous.
FLOWERS: white flowers, mostly May-September, but can bloom anytime.

SPACING: 6 inches to 1 foot.
PROPAGATION: seed, division of bulbs.
WILDLIFE VALUE: nectar for insects, plant may be poisonous to grazing animals.
TRADE AVAILABILITY: poor, (off and on).
COMMENTS: This plant should be grown more often. The Hill Country Rain Lily – *Cooperia pedunculata*, may also be available, but its range is really more western.



PREFERRED HABITAT: streams, meadows.
USUAL SIZE: 2-4 feet.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, clay.
LIGHT: partial shade to full sun.
FOLIAGE: lanceolate, serrated leaves.
FLOWERS: pinkish lavender flowers in spikes.
SPACING: 2 feet apart.
PROPAGATION: seed, root division.

WILDLIFE VALUE: nectar for insects.

TRADE AVAILABILITY: good.

COMMENTS: This is an easy plant to grow and it is very dependable.



PREFERRED HABITAT: floodplains, borders of woodlands, and prairies.

USUAL SIZE: 3-5 feet.

BAYOU SITE: top bank, slopes.

SOIL TYPE: sand, loam, clay.

LIGHT: full sun to partial shade.

FOLIAGE: The alternate leaves are narrowly lanceolate to elliptic.

FLOWERS: yellow flowers July to November.

SPACING: 2-4 feet.

PROPAGATION: seed.

WILDLIFE VALUE: nectar for insects, birds and mammals eat the seeds, leaves, and, flowers.

TRADE AVAILABILITY: fair.

COMMENTS: This species is normally found in seed, and other *Solidago* species may occasionally be available in containers.



PREFERRED HABITAT: woodlands and stream banks.

USUAL SIZE: usually 3 feet, can reach 6 feet.

BAYOU SITE: top bank, upper slope.

SOIL TYPE: loam.

LIGHT: shade to part shade.

FOLIAGE: dormant in winter.

FLOWERS: white flowers in fall.

SPACING: 2 feet.

PROPAGATION: root division in winter.

WILDLIFE VALUE: nectar for insects.

TRADE AVAILABILITY: fair to poor.

COMMENTS: After the first hard freeze, the stems split open and expose ice from the moisture inside.



PREFERRED HABITAT: prairies, marshes, riparian areas

USUAL SIZE: 1 1/2-2 ft.

BAYOU SITE: top bank.

SOIL TYPE: sand, loam, clay,

tolerates poor drainage.

LIGHT: dappled shade to moderate sun.

FOLIAGE: evergreen to dormant in winter.

FLOWERS: flowers March-May, purplish pink, 1 inch across.

SPACING: 12-15 inches.

PROPAGATION: by seed.

WILDLIFE VALUE: nectar for bees.

TRADE AVAILABILITY: fair to good.

COMMENTS: A tenacious plant to use for filler. Green foliage is usually present during most winters – a big plus.



PREFERRED HABITAT: prairies, meadows, moist openings in woods.

USUAL SIZE: 6-10 feet.

BAYOU SITE: top bank, upper slope.

SOIL TYPE: sand, loam, acidic.

LIGHT: full sun.

FOLIAGE: leaves are 8 inches to 2ft. long and light gray-green.

FLOWERS: 3 inch wide yellow blooms with a large brown cone in July.

SPACING: 2 feet.

PROPAGATION: seed, division.

WILDLIFE VALUE: deer will browse this plant.

TRADE AVAILABILITY: fair.

COMMENTS: This can be a reliable and long lived plant.



PREFERRED HABITAT: wetlands, wet woodland edges.

USUAL SIZE: 3-7 feet, can reach 12 feet.

BAYOU SITE: toe, top bank.

SOIL TYPE: sand, loam, clay, moist.

LIGHT: partial shade to full sun.

FOLIAGE: dormant in winter, triangular, up to 6 inches long, light green.

FLOWERS: May-October, white or pink, 4 inches in diameter, funnel shaped.

SPACING: 4-6 feet.

PROPAGATION: seed, cuttings.

WILDLIFE VALUE: foliage for butterfly larvae.

TRADE AVAILABILITY: fair.

COMMENTS: A tough, root hardy, moisture loving Hibiscus.



TRADE AVAILABILITY: fair.

COMMENTS: This legume is a great addition for seed mixes.

PREFERRED HABITAT: prairies, meadows.
USUAL SIZE: 1-3 feet.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay.
LIGHT: full sun to partial shade.
FOLIAGE: dormant in winter.
FLOWERS: white blooms, May-September.
SPACING: 15 lbs. pure live seed for acre.
PROPAGATION: seed.
WILDLIFE VALUE: food source for birds.



PROPAGATION: seed in spring or fall, division of clumps, self layering.

WILDLIFE VALUE: butterfly nectar source.

TRADE AVAILABILITY: fair to good.

COMMENTS: Should be added to prairie or wildflower meadow seed mixes. Self-seeds well after established.

PREFERRED HABITAT: prairies, woodlands.
USUAL SIZE: 1 1/2-2 feet.
BAYOU SITE: top bank.
SOIL TYPE: sand, clay, loam.
LIGHT: partial shade to full sun.
FOLIAGE: dormant in winter.
FLOWERS: April-June, yellow, 2-3 inches across, on 2-3 foot tall stems.
SPACING: 12-18 inches apart for plants, or 10 lbs. seed per acre.



WILDLIFE VALUE: nectar for insects.

TRADE AVAILABILITY: fair.

COMMENTS: A form with white edged leaves is sold in the landscape trade.

PREFERRED HABITAT: woods.
USUAL SIZE: to 2 feet.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay (prefers clay).
LIGHT: partial shade to full sun.
FOLIAGE: dormant in winter.
FLOWERS: pink blooms in summer.
SPACING: 1-2 feet.
PROPAGATION: cuttings.



SPACING: 1 foot.

PROPAGATION: cuttings, seed.

WILDLIFE VALUE: attracts bees and butterflies.

TRADE AVAILABILITY: poor to fair.

COMMENTS: This native is usually overlooked because of the bad reputation of the invasive, exotic Purple Loosestrife – *Lythrum salicaria*.

PREFERRED HABITAT: wet meadows, ditches, edges of wetlands.
USUAL SIZE: to 5 feet.
BAYOU SITE: top bank, slopes.
SOIL TYPE: moist soils.
LIGHT: full sun to partial shade.
FOLIAGE: leaves are oblong-ovate to linear-lanceolate, the upper leaves are small, and flat against the stem.
FLOWERS: purple blooms April-October.



FLOWERS: purple spikes, 1-3 feet long, for a couple of weeks in late summer or early fall.

SPACING: 2 feet.

PROPAGATION: seed, division of corms.

WILDLIFE VALUE: butterflies are fond of the flowers.

TRADE AVAILABILITY: fair.

COMMENTS: Many species of *Liatris* are declining because of the loss of viable prairie habitats.

PREFERRED HABITAT: prairies, open sandy areas, bogs.
USUAL SIZE: 2-5 feet.
BAYOU SITE: top bank.
SOIL TYPE: sandy, acidic soils.
LIGHT: full sun.
FOLIAGE: dormant in winter.



SPACING: 1 ft. apart.

PROPAGATION: seed, root division.

WILDLIFE VALUE: nectar for insects.

TRADE AVAILABILITY: good.

COMMENTS: This plant can be like a ground cover when conditions are good.

PREFERRED HABITAT: prairies and open woods.
USUAL SIZE: 18 inches when blooming, much less otherwise.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay.
LIGHT: shade to full sun.
FOLIAGE: dormant in dry summers.
FLOWERS: light blue flowers in April.



PREFERRED HABITAT: hardwood bottomlands.
USUAL SIZE: 1-2 feet.
BAYOU SITE: top bank.
SOIL TYPE: sand, loam, acid.
LIGHT: shade to partial shade.
FOLIAGE: the leaves form an umbrella shape, goes dormant after going to seed.
FLOWERS: white blooms in April.

FLOWERS: yellow, oval shaped fruit in May.

SPACING: 2 feet.

PROPAGATION: division or seed.

WILDLIFE VALUE: nectar for insects and turtles and small mammals eat the ripe fruit.

TRADE AVAILABILITY: poor.

COMMENTS: It is thought that Mayapple has beneficial medicinal uses.



PREFERRED HABITAT: prairies, open woods.

USUAL SIZE: 1-2 feet.

BAYOU SITE: top bank, upper slope.

SOIL TYPE: sandy loam, clay loam.

LIGHT: partial shade to full sun.

FOLIAGE: semi-evergreen to dormant, up to 3 inches, lobed.

FLOWERS: spring-summer, pink with yellow center, cup shaped, up to 3 inches across.

SPACING: 10-12 inches.

PROPAGATION: cuttings, root division, by seed- 1/2 lb per acre.

WILDLIFE VALUE: nectar for butterflies.

TRADE AVAILABILITY: fair-poor.

COMMENTS: A scrappy, beautiful perennial that holds its own.



PREFERRED HABITAT: stream banks, prairies, moist ditches.

USUAL SIZE: 4-6 feet, sometimes 9-10 feet.

BAYOU SITE: top bank, slopes.

SOIL TYPE: sand, loam, clay.

LIGHT: partial shade to full sun.

FOLIAGE: dormant in winter, 2-10 inches long, hairy.

FLOWERS: August-October, yellow, 3 inches across.

SPACING: 3-4 feet.

PROPAGATION: root division, seed, colonization.

WILDLIFE VALUE: nectar and larval food plant for butterflies, seeds enjoyed by deer and birds, beneficial insectary plant.

TRADE AVAILABILITY: fair.

COMMENTS: A very tough, resourceful, pioneer plant, handles abuse well.



PREFERRED HABITAT: prairies, meadows, open woods.

USUAL SIZE: 1 1/2-2 1/2 feet, can reach 6 feet.

BAYOU SITE: top bank, upper slope.

SOIL TYPE: sand, loam, clay.

LIGHT: partial shade to full sun.

FOLIAGE: winter rosette.

FLOWERS: sky blue blooms in fall.

SPACING: 2 feet.

PROPAGATION: seed, cuttings.

WILDLIFE VALUE: nectar for insects and hummingbirds.

TRADE AVAILABILITY: poor.

COMMENTS: This *Salvia* species has been in decline in our area.



PREFERRED HABITAT: prairies, meadows, woodland openings.

USUAL SIZE: 1 1/2 - 3 feet.

BAYOU SITE: top banks, slopes.

SOIL TYPE: sand, loam, clay.

LIGHT: part shade to full sun.

FOLIAGE: evergreen in warmer winters.

FLOWERS: red, yellow, and orange mixes of flowers May to Frost.

SPACING: 1-2 feet.

PROPAGATION: seed, cuttings.

WILDLIFE VALUE: nectar for insects and ripe achenes are eaten by birds.

TRADE AVAILABILITY: fair.

COMMENTS: This is a reliable plant for restoration projects. All yellow varieties of this plant are known as Prairie Coneflower.



PREFERRED HABITAT: grasslands, moist, well-drained woods.

USUAL SIZE: 8-12 inches.

BAYOU SITE: top bank.

SOIL TYPE: sand, loam, clay.

LIGHT: partial shade to full sun.

FOLIAGE: grayish green, dormant in winter.

FLOWERS: April-May, pale pink to lavender, 1 inch across.

SPACING: 12-15 inches apart.

PROPAGATION: cuttings, root division, seed.

WILDLIFE VALUE: butterfly nectar plant.

TRADE AVAILABILITY: fair.

COMMENTS: Outstanding color in the spring more than makes up for its disappearance during winters and summers.



PREFERRED HABITAT: prairies, open Pine woodlands.
USUAL SIZE: 3-4 feet, can reach 6 feet.
BAYOU SITE: top bank.
SOIL TYPE: sand, loam, clay, acid or lime.
LIGHT: full sun.
FOLIAGE: dormant in winter.
FLOWERS: pale green, 1 inch globe, late spring or early to mid-summer.

SPACING: 3 feet.
PROPAGATION: seed, root division.
WILDLIFE VALUE: attracts butterflies.
TRADE AVAILABILITY: fair to poor.
COMMENTS: This plant closely resembles plants in the *Yucca* genus.



PREFERRED HABITAT: low, wet areas on edges of woods, swamps, and wet meadows.
USUAL SIZE: 3-8 feet.
BAYOU SITE: toe, lower slope, moist top banks.
SOIL TYPE: sand, loam, clay, moist.
LIGHT: full sun to partial shade.
FOLIAGE: dormant in winter, oval heart shaped leaves.
FLOWERS: white or cream blooms, July-September.

SPACING: 3-5 feet.
PROPAGATION: seed, cuttings.
WILDLIFE VALUE: nectar for insects.
TRADE AVAILABILITY: good.
COMMENTS: This species normally has white or cream colored flowers, but there are many cultivars and hybrids with pink, swirls, and maroon blooms.



PREFERRED HABITAT: fields, woods, Pinelands.
USUAL SIZE: 1 foot or less.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, well drained.
LIGHT: part shade to full sun.
FOLIAGE: evergreen to semi-dormant.
FLOWERS: pink for wild species, purple, pink, or white for cultivars.
SPACING: 1 foot.
PROPAGATION: cuttings, seed.

WILDLIFE VALUE: nectar for insects and browse for mammals.
TRADE AVAILABILITY: poor for wild species, good for cultivars.
COMMENTS: The wild variety can be found in seed. Scrutinize and research the cultivars well, as many of them are hybrids and may not be suitable for wild plantings.



PREFERRED HABITAT: swamps, wet pinelands, coastal prairies.
USUAL SIZE: 3-6 feet.
BAYOU SITE: toe* (when slow and sluggish), wet top banks and slopes.
SOIL TYPE: sand, loam, clay, moist.
LIGHT: partial shade to full sun.
FOLIAGE: linear or narrowly lanceolate leaves, dormant in winter.

FLOWERS: yellow blooms in October.
SPACING: 1 foot.
PROPAGATION: seed, division.
WILDLIFE VALUE: the seeds are eaten by goldfinches, nectar for butterflies and bees.
TRADE AVAILABILITY: fair.
COMMENTS: This species can handle being up to 6 inches underwater.



PREFERRED HABITAT: prairies, meadows.
USUAL SIZE: 1-1 ½ feet.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay.
LIGHT: partial shade to full sun.
FOLIAGE: semi-evergreen.
FLOWERS: yellow blooms from March-November, but mostly in spring time.
SPACING: 1 foot.

PROPAGATION: seed.
WILDLIFE VALUE: insects are attracted to the flowers.
TRADE AVAILABILITY: fair.
COMMENTS: This species is native to the western edges of our watersheds and it needs good drainage.



PREFERRED HABITAT: prairies, open areas, banks.
USUAL SIZE: 1-3 feet.
BAYOU SITE: top bank.
SOIL TYPE: sand, loam, clay.
LIGHT: partial shade to full sun.
FOLIAGE:
FLOWERS: purple, pink, blue, or whitish blooms, summer to fall.

SPACING: 1 foot.
PROPAGATION: seed.
WILDLIFE VALUE: attracts insects.
TRADE AVAILABILITY: fair to good.
COMMENTS: The cultivars of this plant are known as "Lisianthus".



PREFERRED HABITAT: fields, swamps, rich sandy woods.
USUAL SIZE: 1 ½-3 feet.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay.
LIGHT: partial shade to full sun.
FOLIAGE: deciduous.
FLOWERS: orange and yellow blooms, spring to frost.
FLOWERS: small, bluish black berries.

BARK/BRANCHES: woody stems.

SPACING: 2-3 feet.

PROPAGATION: seed, cuttings, layering.

WILDLIFE VALUE: nectar for insects and hummingbirds, fruit for birds, larval host plant of the Painted Lady butterfly.

TRADE AVAILABILITY: fair.

COMMENTS: Most of the Lantana encountered in our area is the invasive, exotic – *Lantana camara*.



PREFERRED HABITAT: prairies, meadows, open woods.
USUAL SIZE: 2-3 feet.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay.
LIGHT: partial shade to full sun.
FOLIAGE: dormant in summer.
FLOWERS: blue to magenta blooms March-July.
SPACING: 1 foot.

PROPAGATION: seed, root division.

WILDLIFE VALUE: herbivorous mammals eat the foliage.

TRADE AVAILABILITY: fair.

COMMENTS: Ohio Spiderwort – *Tradescantia ohioensis*, is more common in our area, but is usually harder to find. Hybrids of different species also exist in the nursery trade. The young stems, leaves, and flowers are edible.



PREFERRED HABITAT: open woods, near streams.
USUAL SIZE: 2-4 feet.
BAYOU SITE: top bank.
SOIL TYPE: sand, loam, clay.
LIGHT: dappled shade to full sun.
FOLIAGE: 1-2 ½ inches long, dormant to semi-evergreen, hairy leaves and stems.
FLOWERS: May-November, red, pink, white, coral, 1 inch tubular.
SPACING: 1-2 feet.
PROPAGATION: seeds, cuttings.
WILDLIFE VALUE: nectar for hummingbirds, and insects, butterfly larval food source.

TRADE AVAILABILITY: good.

COMMENTS: Usually re-seeds if parent plants are killed by hard winters.



PREFERRED HABITAT: prairies and open areas.
USUAL SIZE: 2-3 feet.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: clay, caliche.
LIGHT: full sun.
FOLIAGE: perennial, dormant in winter.
FLOWERS: white blooms in June and July.

SPACING: 3lbs of seed per acre.

PROPAGATION: seed.

WILDLIFE VALUE: beneficial to birds, butterflies, and bees.

TRADE AVAILABILITY: fair.

COMMENTS: This legume needs well drained soil.



PREFERRED HABITAT: along streams, woodlands.
USUAL SIZE: 2-4 feet.
BAYOU SITE: top bank, slopes.
SOIL TYPE: sand, loam, clay.
LIGHT: shade to full sun.
FOLIAGE: semi-evergreen to dormant in winter, light green, 2-4 inches wide and long.

FLOWERS: red or white flowers arranged in a loose whorl, bloom is sporadic during warm seasons.

FLOWERS: August-September, red, usually mealy, berry-like fruit, ¾ inch, in fall, edible.

BARK/BRANCHES: stems are woody to semi-woody.

SPACING: 3-4 feet apart.

PROPAGATION: by seed, cuttings, divisions.

WILDLIFE VALUE: nectar for hummingbirds, fruit for mammals, foliage for butterfly larvae.

TRADE AVAILABILITY: good.

COMMENTS: This plant is extremely tough and tolerant of extreme conditions. The flowers are very attractive, and this plants many values qualify it as a staple for bayou corridors.



PREFERRED HABITAT: prairies and thin woods.
USUAL SIZE: 1-3 feet.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay, caliche.
LIGHT: partial shade to full sun.
FOLIAGE: silver-gray leaves, can be mowed once or twice a year.
FLOWERS: yellow flowers in summer.
SPACING: 1 foot.

PROPAGATION: seed or division.

WILDLIFE VALUE: cover for creatures and nectar for insects.

TRADE AVAILABILITY: fair.

COMMENTS: "Valerie Finnis", and "Silver King", are two cultivars.



PREFERRED HABITAT: prairies, meadows, open woods.
USUAL SIZE: 1-2 feet.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay, gravel.
LIGHT: partial shade to full sun.
FOLIAGE: winter rosette.
FLOWERS: wine colored blooms February to June.
SPACING: 2 feet.
PROPAGATION: seed.

WILDLIFE VALUE: bees gather pollen from the flowers.
TRADE AVAILABILITY: fair to poor.
COMMENTS: This plant can handle mowing.



PREFERRED HABITAT: swamps, moist woods, stream banks.
USUAL SIZE: 4-6 feet.
BAYOU SITE: wet top banks.
SOIL TYPE: sand, loam, clay, handles poor drainage.
LIGHT: shade to partial shade.
FOLIAGE: dormant in winter.
SPACING: 3-4 feet.
PROPAGATION: division.
WILDLIFE VALUE: provides cover for wildlife.

TRADE AVAILABILITY: poor.
COMMENTS: A fern that can stand hot summers and should be used more often.



FERNS

PREFERRED HABITAT: ravines, streams, swamps, thickets.
USUAL SIZE: 1-2 feet.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, moist, well drained.
LIGHT: shade to dappled shade.
FOLIAGE: evergreen leaves.
SPACING: 1-2 feet.
PROPAGATION: root division.

WILDLIFE VALUE: cover for small creatures.
TRADE AVAILABILITY: poor.
COMMENTS: This is a plant that must have ideal conditions to flourish.



PREFERRED HABITAT: swamps, meadows, streams.
USUAL SIZE: 1-3 ft.
BAYOU SITE: top bank, upper slope (moist).
SOIL TYPE: sand, loam.
LIGHT: shade to full sun.
FOLIAGE: to 4 ½ ft. (sterile leaves), to 2 ½ ft. (fertile leaves).
SPACING: 1-2 feet.
PROPAGATION: division.
WILDLIFE VALUE: cover, deer may

browse on a limited extent.
TRADE AVAILABILITY: poor.
COMMENTS: This species is native to Asia as well. more often.



PREFERRED HABITAT: woodlands, and along streams.
USUAL SIZE: 1 foot.
BAYOU SITE: top bank.
SOIL TYPE: sand, loam.
LIGHT: shade.
FOLIAGE: dormant in winter or when too dry.
SPACING: 1 foot.
PROPAGATION: division.

WILDLIFE VALUE: cover for small creatures.
TRADE AVAILABILITY: poor.
COMMENTS: This plant does not like wet clays.



PREFERRED HABITAT: wetlands, moist woods.
USUAL SIZE: 1 ½ feet tall, can reach 4-5 feet.
BAYOU SITE: toe, wet top banks.
SOIL TYPE: sandy loam, clay, tolerates moist, poorly drained soils.
LIGHT: shade to partial shade.
FOLIAGE: light green, lush, dormant in winter.

SPACING: 2-3 feet apart.
PROPAGATION: root divisions.
WILDLIFE VALUE: cover for ground dwellers.
TRADE AVAILABILITY: good.
COMMENTS: A good choice when a lush filler plant is needed, provided the location is routinely moist.

VINES



PREFERRED HABITAT: stream banks, open ground.
USUAL SIZE: climbs to 10 feet.
BAYOU SITE: top bank, slopes.
SOIL TYPE: sand, loam, clay.
LIGHT: partial shade to full sun.
FOLIAGE: palmately lobed leaves.
FLOWERS: white blooms with red center, April to November, in the afternoons.
SPACING: 6 feet.

PROPAGATION: seed.
WILDLIFE VALUE: nectar for butterflies.
TRADE AVAILABILITY: poor.
COMMENTS: This "Morning Glory" actually blooms around noon.



PREFERRED HABITAT: woodlands.
BAYOU SITE: top banks.
SOIL TYPE: sand, loam, clay.
LIGHT: part shade to full sun.
FOLIAGE: almost evergreen leaves are ovate to oblong, green above, and glaucous below.
FLOWERS: red, 2 inch clusters, can be ever-blooming in mild weather.
SPACING: 6-8 feet.
PROPAGATION: cuttings, layering.

WILDLIFE VALUE: nectar for butterflies and hummingbirds.
TRADE AVAILABILITY: good.
COMMENTS: This species should be planted instead of the invasive, exotic Japanese Honeysuckle – *Lonicera japonica*.



PREFERRED HABITAT: wetlands, wooded areas, and along streams.
USUAL SIZE: up to 10 feet long.
BAYOU SITE: top bank, upper slope.
SOIL TYPE: sand, loam, clay.
LIGHT: partial shade.
FOLIAGE: dormant in winter.
FLOWERS: spring to early summer, sometimes to October.
SPACING: 2 feet apart.
PROPAGATION: cuttings.

WILDLIFE VALUE: birds eat the seeds and butterflies feed on the nectar.
TRADE AVAILABILITY: poor.
COMMENTS: This plant can bloom while it is still very low to the ground.



PREFERRED HABITAT: woodlands.
BAYOU SITE: top bank, slopes.
SOIL TYPE: sand, loam, clay.
LIGHT: shade to full sun.
FOLIAGE: ovate to oblong, evergreen leaves to 6 inches.
FLOWERS: red or orange and yellow bell shaped flowers, spring-fall.
SPACING: 3 feet.
PROPAGATION: seed, softwood

cuttings, and root cuttings.
WILDLIFE VALUE: nectar for insects and hummingbirds.
TRADE AVAILABILITY: good.
COMMENTS: This vine does not need a trellis as it has claws that will cling to things.



PREFERRED HABITAT: woodland edges or openings.
BAYOU SITE: top bank, slopes.
SOIL TYPE: sand, loam, clay.
LIGHT: part shade to full sun.
FOLIAGE: evergreen, elliptic, lanceolate, or ovate leaves.
FLOWERS: yellow funnel shaped, January or February to April.
SPACING: 3 feet apart.
PROPAGATION: cuttings.
WILDLIFE VALUE: nectar for insects,

good cover for birds.
TRADE AVAILABILITY: good.
COMMENTS: This plant is very common in landscapes.



PREFERRED HABITAT: woods.
BAYOU SITE: top bank.
SOIL TYPE: sand, loam, clay.
LIGHT: shade to full sun.
FOLIAGE: deciduous.
FLOWERS: insignificant.
FLOWERS: edible grapes from July-September.
SPACING: 10 feet.
PROPAGATION: seed or cuttings.
WILDLIFE VALUE: many creatures eat the fruit.

TRADE AVAILABILITY: good.
COMMENTS: Many different cultivars of this plant exist. Wine is also made from the grapes.



PREFERRED HABITAT: fields, woods, along streams.
BAYOU SITE: top banks, slopes.
SOIL TYPE: sand, loam.
LIGHT: part shade to full sun.
FOLIAGE: perennial vine with palmately, three-lobed leaves.
FLOWERS: lavender flowers, May-August.

FLOWERS: edible fruit with little pulp.

SPACING: 2-3 feet.

PROPAGATION: seed or cuttings.

WILDLIFE VALUE: larval food for butterflies and birds eat the fruit.

TRADE AVAILABILITY: poor, fair for the hybrid "Incense".

COMMENTS: The fruit is known as a "Maypop".



PREFERRED HABITAT: woodlands.

BAYOU SITE: top banks, slopes.

SOIL TYPE: sand, loam, clay.

LIGHT: shade to full sun.

FOLIAGE: deciduous, with palmately compound leaves.

FLOWERS: inconspicuous.

FRUIT: blue-black berries in fall.

SPACING: 1 to 8 feet, depending on site.

PROPAGATION: seed, cuttings, layering.

WILDLIFE VALUE: many species of

birds eat the berries.

TRADE AVAILABILITY: fair to poor.

COMMENTS: This vine climbs by tendrils.



PREFERRED HABITAT: open woods, along streams, and in low places.

USUAL SIZE: high climber.

BAYOU SITE: top banks.

SOIL TYPE: sand, loam, clay, moist, well-drained.

LIGHT: partial shade.

FOLIAGE: dormant in winter.

FLOWERS: purple blooms in summer.

SPACING: 2 feet.

PROPAGATION: cuttings.

WILDLIFE VALUE: cover and food for birds.

TRADE AVAILABILITY: poor.

COMMENTS: This plant is very tough after it is firmly established.

WETLAND PLANTS



PREFERRED HABITAT: fresh to intermediate marshes, and along streams.

USUAL SIZE: 4 feet tall.

BAYOU SITE: toe, wet top banks.

SOIL TYPE: mud.

LIGHT: full sun to partial shade.

FOLIAGE: leaves are 4 inches wide and 2 ft. long.

FLOWERS: white blooms, May-November.

SPACING: 2 feet apart.

PROPAGATION: root division.

WILDLIFE VALUE: seeds for puddle ducks.

TRADE AVAILABILITY: fair.

COMMENTS: Several other species of *Sagittaria* might also be used.



PREFERRED HABITAT: woodland edges or openings.

BAYOU SITE: top bank, slopes.

SOIL TYPE: sand, loam, clay.

LIGHT: partial shade to full sun.

FOLIAGE: deciduous.

FLOWERS: red, yellow, or orange, 3-4 inch flowers from June to September.

SPACING: 3-4 feet.

PROPAGATION: seed, stem, or root cuttings.

WILDLIFE VALUE: nectar for hummingbirds and butterflies.

TRADE AVAILABILITY: fair.

COMMENTS: This plant is very common in the wild.



PREFERRED HABITAT: freshwater and intermediate marshes, shallow water, and along streams.

USUAL SIZE: 7 feet.

BAYOU SITE: toe, wet top banks.

SOIL TYPE: mud.

LIGHT: partial shade to full sun.

FOLIAGE: dormant in winter.

FLOWERS: brown fruiting stalks.

SPACING: 3-4 feet apart.

PROPAGATION: root division.

WILDLIFE VALUE: rhizomes are eaten by muskrats and geese and smaller birds forage among Cattail colonies.

TRADE AVAILABILITY: poor.

COMMENTS: Cattail is one of the best aquatic plants for improving water quality.



PREFERRED HABITAT: wetlands and edges of streams.
USUAL SIZE: 1-3 feet.
BAYOU SITE: toe, wet top banks.
SOIL TYPE: sand, loam, clay, handles poor drainage.
LIGHT: shade to full sun.
FOLIAGE: semi-evergreen, strap-like leaves.
FLOWERS: white flowers in summer and fall.

SPACING: 1-2 feet.
PROPAGATION: bulb division.
WILDLIFE VALUE: ducks and mammals feed on seeds.
TRADE AVAILABILITY: fair.
COMMENTS: Excellent plant for the toe of waterways.



PREFERRED HABITAT: fresh and brackish marshes, mouths of rivers.
USUAL SIZE: 4-8 feet.
BAYOU SITE: toe, shallow water.
SOIL TYPE: moist soils.
LIGHT: full sun to light shade.
FOLIAGE: evergreen.
FLOWERS: branched, terminal cluster of brownish spikelets.
SPACING: 2-4 feet.

PROPAGATION: root division.
WILDLIFE VALUE: waterfowl eat the seeds.
TRADE AVAILABILITY: poor.
COMMENTS: This plant is being used in our area for marsh restoration.



PREFERRED HABITAT: mud of stagnant to slow moving water.
USUAL SIZE: stems have a very fast growth rate and are 2-5 ½ inches wide.
BAYOU SITE: below toe in calm, clear waterways.
SOIL TYPE: mud.
LIGHT: full sun to light shade.

FOLIAGE: mostly winter hardy but somewhat brittle.
FLOWERS: white flowers above the waterline.
SPACING: 6 inches to 1 foot.
PROPAGATION: seed and transplants.
WILDLIFE VALUE: oxygenator, nursery for aquatic life.
TRADE AVAILABILITY: good.
COMMENTS: Easily found in the aquarium trade.



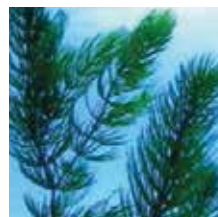
PREFERRED HABITAT: marshes and swamps along the coast.
USUAL SIZE: 2-4 feet.
BAYOU SITE: toe, lower slope, wet top banks.
SOIL TYPE: sand, loam, clay, moist.
LIGHT: full sun to partial shade.
FOLIAGE: leaves are 2 ft. long and 6 inches wide, dormant in late winter.
FLOWERS: yellow blooms in spring.

SPACING: 2 feet.
PROPAGATION: seed, division.
WILDLIFE VALUE: nectar for insects.
TRADE AVAILABILITY: fair.
COMMENTS: This is a parent of the yellow flowering Garden Cannas. It is one of the best plants known for improving water quality.



PREFERRED HABITAT: wetlands, ditches, and margins of streams.
USUAL SIZE: stems can creep to over 6 feet.
BAYOU SITE: toe.
SOIL TYPE: sand, loam, clay, moist.
LIGHT: full sun to partial shade.
FOLIAGE: deciduous.
FLOWERS: yellow.
SPACING: 1 foot.
PROPAGATION: transplants.

WILDLIFE VALUE: nectar for insects, marginal habitat for aquatic wildlife, seeds for water fowl.
TRADE AVAILABILITY: poor.
COMMENTS: This plant may have the ability to cleanse pesticides from water.



PREFERRED HABITAT: slow streams and quiet water of ponds and lakes.
USUAL SIZE: long stems form dense colonies.
BAYOU SITE: submersed.
SOIL TYPE: sand, loam, clay.
LIGHT: full sun.
FOLIAGE: evergreen, turns almost black in winter.
FLOWERS: tiny white flowers.

SPACING: 6 inches to 1 foot.
PROPAGATION: vegetative fragments and seed.
WILDLIFE VALUE: excellent habitat for small fish and invertebrates and ducks eat the seeds.
TRADE AVAILABILITY: good.
COMMENTS: Removes excess nutrients from water.



PREFERRED HABITAT: open and wooded areas along streams, and wet areas.
USUAL SIZE: 1-3 feet, occasionally to 9 feet.
BAYOU SITE: toe, lower slope.
SOIL TYPE: sand, loam, clay, handles poor drainage.
LIGHT: partial shade to full sun.
FOLIAGE: evergreen.
SPACING: 1-2 feet.
PROPAGATION: division.
WILDLIFE VALUE: cover for small animals, and some wildlife may browse on it.

Dragonflies lay their eggs on the stems.

TRADE AVAILABILITY: good.

COMMENTS: Once this plant gets established, it is great for erosion control.



PREFERRED HABITAT: wetlands, margins of lakes, ponds, and streams.
USUAL SIZE: 3 feet.
BAYOU SITE: toe, shallow water.
SOIL TYPE: moist mineral or organic soils.
LIGHT: full sun to partial shade.
FOLIAGE: 4-10 inch leaf blades.
FLOWERS: long, narrow, obscure inflorescence.

SPACING: 6 inches to 1 foot.

PROPAGATION: transplanting rhizomes.

WILDLIFE VALUE: rhizomes are consumed by muskrat.

TRADE AVAILABILITY: fair.

COMMENTS: This plant is useful for erosion control.



PREFERRED HABITAT: margins of streams and ponds, also brackish areas.
USUAL SIZE: 6 inches high, creeping.
BAYOU SITE: toe, wet top banks (bogs).
SOIL TYPE: moist soils.
LIGHT: full sun to partial shade.
FOLIAGE: succulent, lemon scented leaves.

FLOWERS: blue flowers about 1 centimeter wide.

SPACING: 6 inches to 1 foot.

PROPAGATION: transplants of stems with roots.

WILDLIFE VALUE: nursery plant for fish and amphibians.

TRADE AVAILABILITY: good.

COMMENTS: An easy plant to find in the aquarium trade.



PREFERRED HABITAT: marshes, along streams, ditches.
USUAL SIZE: 2-4 feet.
BAYOU SITE: toe, moist top banks.
SOIL TYPE: moist sand, loam or clay.
LIGHT: full sun to partial shade.
FOLIAGE: annual.
FLOWERS: pink blooms, June to frost.
SPACING: 1-2 feet.
PROPAGATION: seed, transplants.

WILDLIFE VALUE: birds eat the seeds.

TRADE AVAILABILITY: poor.

COMMENTS: This plant requires periodic water level draw downs in spring and early summer.



PREFERRED HABITAT: wetlands, slightly brackish marshes, ditches.
USUAL SIZE: 1-3 feet.
BAYOU SITE: water's edge.
SOIL TYPE: wet soils, clay, loam.
LIGHT: shade-partial shade.
FOLIAGE: heart-shaped, dormant in winter, 3-6 inches long.
FLOWERS: spring-summer, 1/8 inch white individuals, drooping spikes.

SPACING: 2 feet.

PROPAGATION: division of plants.

WILDLIFE VALUE: nectar for bees

TRADE AVAILABILITY: fair.

COMMENTS: An aggressive water's edge colonizer. A companion to Bald Cypress. Handles salinity up to 0.5 ppt.



PREFERRED HABITAT: swamps, ditches.
USUAL SIZE: 6-8 feet with flowers.
BAYOU SITE: toe, wet top bank.
SOIL TYPE: muddy soils, some saline is ok.
LIGHT: partial shade to full sun.
FOLIAGE: dormant in winter, leaves resemble those of the *Canna* spp.
FLOWERS: purple spikes in summer.
SPACING: 2 feet.

PROPAGATION: division.

WILDLIFE VALUE: cover, nectar for insects.

TRADE AVAILABILITY: fair.

COMMENTS: This plant has been shown to significantly improve water quality.



PREFERRED HABITAT: wetlands, edges of streams.
USUAL SIZE: 2-3 feet.
BAYOU SITE: toe, wet top banks.
SOIL TYPE: mud.
LIGHT: water's edge.
FOLIAGE: dormant in winter, lance or triangular shaped leaves to eight inches.
FLOWERS: June-September, purple-blue, 6 inch spikes.
SPACING: 1-2 feet.

PROPAGATION: root division, colonizes by rhizomes.
WILDLIFE VALUE: attracts dragonflies and damselflies, nectar for beneficial insects.
TRADE AVAILABILITY: good to fair.
COMMENTS: Often does best in sluggish bayous or in wetlands adjacent to bayous. Handles salinity up to 0.5 ppt.



PREFERRED HABITAT: fresh to brackish margins of waterways and wetlands.
USUAL SIZE: 1 or 2 inches tall and mat forming.
BAYOU SITE: toe, slopes and top bank when consistently moist.
SOIL TYPE: sand, loam, clay, moist.
LIGHT: partial shade to full sun.
FOLIAGE: succulent stems and leaves.

FLOWERS: small, white to light purple blooms, April to frost.
SPACING: 6 inches apart for sprigs.
PROPAGATION: division.
WILDLIFE VALUE: cover for insects and other small creatures.
TRADE AVAILABILITY: fair, but easy to find in the wild.
COMMENTS: Tough plant that withstands flooding and mowing. A great stabilizer for shorelines and it also provides some wetland margin habitat.



PREFERRED HABITAT: brackish and fresh marshes.
USUAL SIZE: 4-6 feet.
BAYOU SITE: toe, wet top bank.
SOIL TYPE: sand, clay, saline ok.
LIGHT: full sun.
FOLIAGE: 2-6 inch long leaves, dormant in winter.
FLOWERS: pink or white flowers,

summer to fall.
FLOWERS: tan, ring shaped, with seeds that ripen quickly.
SPACING: 4-6 feet.
PROPAGATION: seed, cuttings.
WILDLIFE VALUE: nectar for hummingbirds and butterflies.
TRADE AVAILABILITY: fair.
COMMENTS: Although this is thought of a coastal marsh plant, it has been found in two far inland counties in Texas.



PREFERRED HABITAT: moist sandy soils or shallow freshwater.
USUAL SIZE: to 3 feet.
BAYOU SITE: toe, wet top banks.
SOIL TYPE: moist soils.
LIGHT: full sun to partial shade.
FOLIAGE: evergreen.
FLOWERS: white flowers followed by brown seeds.
SPACING: 1-2 feet.

PROPAGATION: division or seed.
WILDLIFE VALUE: ducks and mammals eat the seeds.
TRADE AVAILABILITY: fair.
COMMENTS: Often used for water gardens. Has been shown to remove Atrazine from water.



PREFERRED HABITAT: shorelines of waterways, ponds, and in ditches.
USUAL SIZE: 3 feet.
BAYOU SITE: toe, lower slope, moist top banks.
SOIL TYPE: moist soils.
LIGHT: full sun to partial shade.
FOLIAGE: annual to perennial, lanceolate leaves.
FLOWERS: white blooms.

SPACING: 1-2 feet.
PROPAGATION: seed, transplants.
WILDLIFE VALUE: seeds are eaten by waterfowl.
TRADE AVAILABILITY: poor.
COMMENTS: This plant endures water level fluctuations.



PREFERRED HABITAT: wet prairies, marshes, borders of bodies of water.
USUAL SIZE: 4-6 feet.
BAYOU SITE: toe (of slow moving waterways), moist top banks.
SOIL TYPE: mucky and moist sandy soils.
LIGHT: full sun to partial shade.
FOLIAGE: perennial.
FLOWERS: terminal cluster of brownish spikelets.

SPACING: 2-3 feet.
PROPAGATION: transplants, division.
WILDLIFE VALUE: seeds, rhizomes, and shoots are eaten by waterfowl.
TRADE AVAILABILITY: poor.
COMMENTS: Can form extensive colonies.



PREFERRED HABITAT: sluggish streams, slightly brackish marshes.
USUAL SIZE: 1-3 feet.
BAYOU SITE: waters edge.
SOIL TYPE: wet soils, loam, clay.
LIGHT: sun-partial shade.
FOLIAGE: upright, sword shaped.
FLOWERS: April-June, large, ornamental, bluish-purple.
FLOWERS: capsule.
SPACING: 2-3 feet.

PROPAGATION: root division.

WILDLIFE VALUE: nectar.

TRADE AVAILABILITY: fair to good.

COMMENTS: Capable of anchoring down a waters edge. Does best along sluggish bayous and creeks. Handles salinity up to 0.5ppt.



PREFERRED HABITAT: streams, mud, shallow water.
USUAL SIZE: 3 feet.
BAYOU SITE: toe, bottom portions submerged.
SOIL TYPE: moist soils.
LIGHT: full sun.
FOLIAGE: linear to lanceolate leaves.
FLOWERS: white or violet blooms with purple dots.
SPACING: 1-2 feet.

PROPAGATION: division.

WILDLIFE VALUE: attracts butterflies and is the larval host for the Texan Crescent-spot Butterfly.

TRADE AVAILABILITY: poor.

COMMENTS: This plant is related to the Shrimp Plant – *Justicia brandegeana*.



PREFERRED HABITAT: stream banks, wetlands.
USUAL SIZE: 1 ½-2 ½ feet.
BAYOU SITE: toe, wet top banks.
SOIL TYPE: moist, sand, loam, clay.
LIGHT: partial shade to full sun.
FOLIAGE: 2 foot long leaves, dormant in winter.
FLOWERS: white, fragrant blooms in

late spring to mid-summer.

SPACING: 1-2 feet.

PROPAGATION: division.

WILDLIFE VALUE: insects are attracted to the flowers.

TRADE AVAILABILITY: fair.

COMMENTS: A good plant for Houston's gumbo soils.



PREFERRED HABITAT: wetlands, bayous.
USUAL SIZE: 12-30 inches.
BAYOU SITE: toe.
SOIL TYPE: moist, sandy loam, clay.
LIGHT: partial shade to full sun.
FOLIAGE: glossy green, long, narrow.
FLOWERS: spring-summer, small white-green bracts.
SPACING: 1-2 feet.
PROPAGATION: division, seed.

WILDLIFE VALUE: seeds.

TRADE AVAILABILITY: fair.

COMMENTS: This plant can usually be found in the water garden trade.



PREFERRED HABITAT: marshes, swamps, fresh to slightly brackish.
USUAL SIZE: 3-6 ft.
BAYOU SITE: toe, wet top banks.
SOIL TYPE: sand, loam, clay, moist.
LIGHT: full sun to partial shade.
FOLIAGE: narrow blue-green leaves to 18 inches long.
FLOWERS: yellow blooms April to October.
SPACING: 2-3 feet.
PROPAGATION: seed, division.
WILDLIFE VALUE: nectar for insects.

TRADE AVAILABILITY: poor to fair.

COMMENTS: In the 1970s, Longwood Gardens in Kennett Square, Pennsylvania crossed *Canna glauca* with several different terrestrial cannas. The result was the Longwood cultivars: (1) 'Endeavor' (red flowers), (2) 'Erebus' (salmon pink flowers), (3) 'Ra' (yellow flowers) and (4) 'Tanny' (burnt orange flowers). It also removes excess nitrogen and phosphorous from water.



PREFERRED HABITAT: ponds, lakes, sluggish streams.
USUAL SIZE: flowers can rise up to 6 inches above the water.
BAYOU SITE: shallow water.
SOIL TYPE: most wet soils.
LIGHT: full sun.
FOLIAGE: orbicular lily pads, dormant in winter.
FLOWERS: white, fragrant, 4-7 inch flowers.

SPACING: 10 feet.

PROPAGATION: division of rhizomes.

WILDLIFE VALUE: beaver, muskrat, and deer will consume the leaves and rhizomes, the seeds are eaten by ducks. Provides habitat for aquatic creatures.

TRADE AVAILABILITY: fair.

COMMENTS: This widespread species is also one the parents for many of the hybrid water lilies in the landscape trade.



PREFERRED HABITAT: ponds, lakes, and bayous.
USUAL SIZE: flowers bloom a few inches above the water.
BAYOU SITE: toe, submerged 1-5 feet, top bank, adjacent wetlands.
SOIL TYPE: mucky substrate.
LIGHT: full sun.
FOLIAGE: dormant in winter, 3-6 inch leaves.

FLOWERS: yellow flowers, emergent, spring to fall.
SPACING: 3-6 feet.
PROPAGATION: division.
WILDLIFE VALUE: mammals eat the rhizomes, and it provides habitat for aquatic creatures.
TRADE AVAILABILITY: poor.
COMMENTS: This species is not as cold tolerant as *Nymphaea odorata* and does best in the southern portions of our area.



PREFERRED HABITAT: ponds and sluggish streams.
USUAL SIZE: rises 1 foot or more above the water.
BAYOU SITE: top bank, adjacent wetlands, or toe, from a few inches to 7 feet underwater.
SOIL TYPE: any soil, at the bottom of bodies of water.

LIGHT: full sun.
FOLIAGE: dormant in winter, perfectly round leaves.
FLOWERS: yellow blooms in summer.
SPACING: 1-2 feet.
PROPAGATION: division or seed.
WILDLIFE VALUE: submerged portions create habitat for invertebrates, seeds are eaten by ducks and other wildlife, beaver and muskrat consume the rhizomes.
TRADE AVAILABILITY: fair.
COMMENTS: The seed head is often used in floral arrangements. The tubers along the rhizome and the seeds are edible.



PREFERRED HABITAT: swamps, wet meadows, bottomlands.
USUAL SIZE: 1-2 feet.
BAYOU SITE: toe, wet top banks.
SOIL TYPE: sand, loam, clay, handles poor drainage.
LIGHT: partial shade to full sun.
FOLIAGE: dormant in dry summers.
FLOWERS: blue, lavender, or white blooms, Spring to Summer.

SPACING: 1 foot.
PROPAGATION: division.
WILDLIFE VALUE: nectar for insects.
TRADE AVAILABILITY: poor.
COMMENTS: This is one of the parents of the Louisiana Iris hybrids.

RESOURCES

THE ARMY CORPS OF ENGINEERS – (281) 497-0740. The agency responsible for wetland related permitting.

BAYOU PRESERVATION ASSOCIATION (BPA) – (713) 529-6443.

www.bayoupreservation.org
 This organization's mission is to protect and restore the richness and diversity of waterways through activism, advocacy, collaboration and education. They work on maintain the health of the are bayous, sponsor educational seminars, bayou cleanups, canoe launches and water quality, monitoring and other bayou related activities. They also work to maintain floodways as habitat corridors. The BPA supports buyouts and other habitat friendly alternatives for flood control.

BUFFALO BAYOU PARTNERSHIP – (713) 752-0314. This group serves as an advisory resource and liaison among groups pursuing development of Bayou amenities and many private – and public-sector entities with interests in and/or jurisdictions over Bayou functions.

CITY OF HOUSTON – PARKS AND RECREATION – FORESTRY DEPARTMENT – (713) 867-0378. The Forestry Department is responsible for urban forestry issues related to land owned by the city.

HARRIS COUNTY FLOOD CONTROL – (713) 684-4000. The agency responsible for regional flood control management.

NATIVE PLANT SOCIETY OF TEXAS – HOUSTON CHAPTER – (281) 489-3127. Houston@npsot.org This group promotes the conservation, research and utilization of the native plants and plant habitats of Texas through education, outreach and example.

SOUTHEAST NURSERY GROWERS ASSOCIATION – www.stnga.org A collection of regional wholesale plant nurseries. A very helpful nursery and plant locator guide on the web.

TEXAS FOREST SERVICE (TFS) – (979) 458-6650. <http://txforestservice.tamu.edu> The TFS is the agency responsible for protecting and enhancing the state's forest resources. This mission includes developing the capacity of communities to plant and care for trees in parks, along streets and in other urban settings.

TEXAS NURSERYMAN AND LANDSCAPE ASSOCIATION (TNLA) – (512) 280-5182. info@txnla.org A landscape/nursery trade organization that maintain a helpful nursery/hardwood/ plant locator service online.

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GLOSSARY

BAYOU. A shallow, often slow moving offshoot of a river found in flood plains. The word is derived from the French "boyau" meaning gut.

BERRY. A fleshy fruit without a hard stone.

BRACKISH MARSH. Wetlands characterized by plants that live and prosper in a salinity range from 3.5 to about 10.0 ppt.

BRACT. Modified leaf of a flower cluster.

BUNCHGRASS. A grass with non-aggressive rhizomes; stems and leaves occur in a bunch.

CAPSULE. A dry fruit composed of more than one ovary, splits open at maturity.

CATKIN. A flexible, scaly spike, usually bearing unisexual flowers.

CLAY-LOAM. Soil containing from 20%-30% clay particles, and from 20%-50% sand particles, with the rest being silt particles.

CLIMAX. A term applied to a population of organisms (plants, ecosystems) that has reached a state of equilibrium with its environment and exhibits only minor changes over time.

CONE. A cluster of flowers or fruit with overlapping scales.

CYME. A determinate flower cluster with innermost flowers blooming first; often flat-topped or convex.

DECIDUOUS. Falling off, leaves fall off in autumn or winter.

DIOECIOUS. Unisexual with staminate (male) and pistillate (female) flowers on separate plants.

DEPOSITION. The build-up of sediment along streambanks.

DRUPE. Usually a 1 seeded, fleshy fruit, with one hard stone.

EROSION. The removal and transportation of soil and rock materials by gravity, wind and running water.

EVERGREEN. Having green leaves throughout the year. Fruit. The seed bearing part of a plant.

INFLORESCENCE. A flower cluster. Invasive. An aggressive non-native plant that has the ability to disrupt or dominate an ecosystem.

LAYERING. Propagation from stems that form roots while still a part of the parent plant.

LOAM. A soil that contains roughly equal portions of sand, silt and clay.

LOBE. A segment formed by a large indentation on the margin of a leaf or flower part.

NATURALIZED. Of foreign origin, but established and reproducing itself as though native.

NECTAR. The sweet secretion of a flower.

OVERSTORY. An umbrella of plants that are taller than those growing underneath (understory).

PALMATELY LOBED. Hand-shaped with the fingers spread. Panicle. A compound or branched raceme, a type of flower cluster.

PERENNIAL. A plant that lives more than one or two years.

PIONEER. A pioneer plant can tolerate difficult conditions such as bare or disturbed soils. Pistil. Seed-bearing organ of a flower.

PPT. Parts per thousand.

POME. An apple-like fruit.

PRAIRIE. A grassland of native grasses, sedges, rushes and forbs with woody plants

making up less than ten percent of the plant community.

RACEME. A type of flower cluster in which the flowers, each on a short stem, are arranged along a central stalk.

RHIZOME. An underground stem or rootstock producing leafy shoots on the upper side and roots on the lower side.

RIPARIAN. Pertaining to the banks of a stream.

SALINE MARSH. Wetlands with a salinity of a0 ppt. or greater. Serrate. Saw-toothed.

SHRUB. A woody, perennial plant smaller than a tree with permanent stems from or near the ground.

SPIKE. A type of flower cluster in which the individual flowers lack stems and are attached directly to the long central stalk.

STAMEN. The pollen-bearing organ of a flower.

STOLON. A mostly horizontal, usually above-ground, stem or branch rooting at the tip of the nodes and forming new plants.

TAPROOT. A main primary root that grows almost straight down.

TOE. The break in the slope at the foot of a bank, where the bank meets the streambed.

WHORL. A cyclic arrangement of like parts.

GLOSSARY TERMS DERIVED IN

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VINES

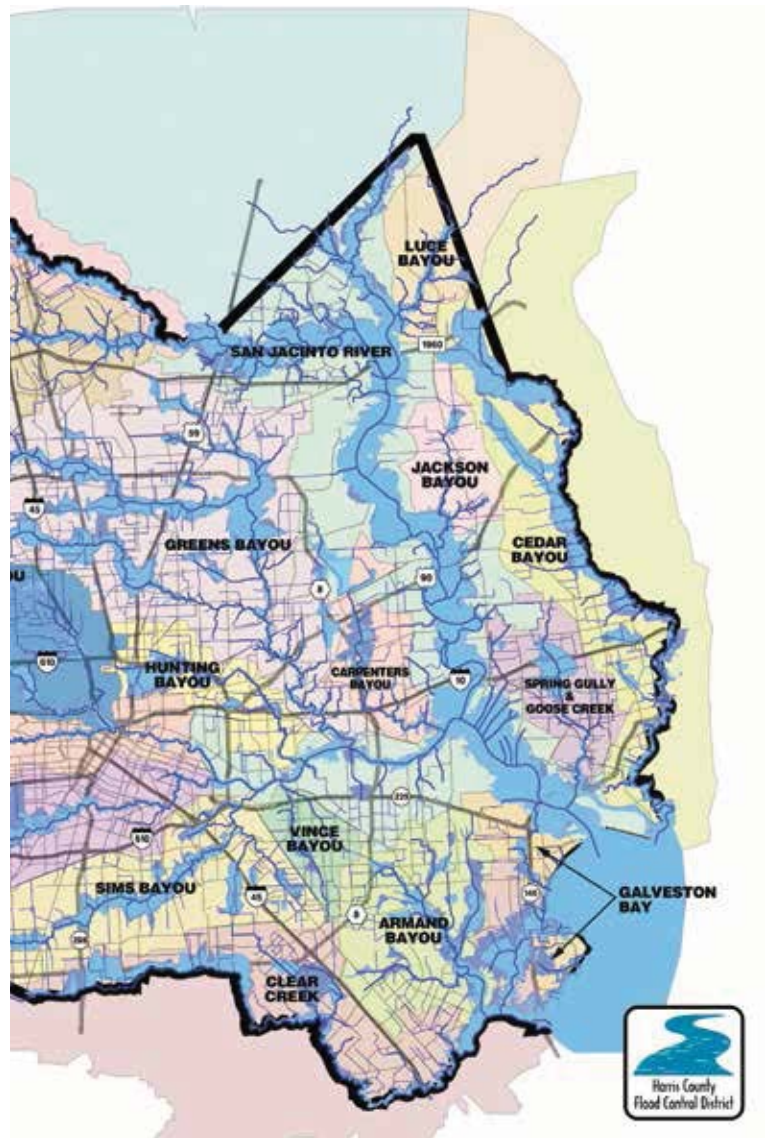
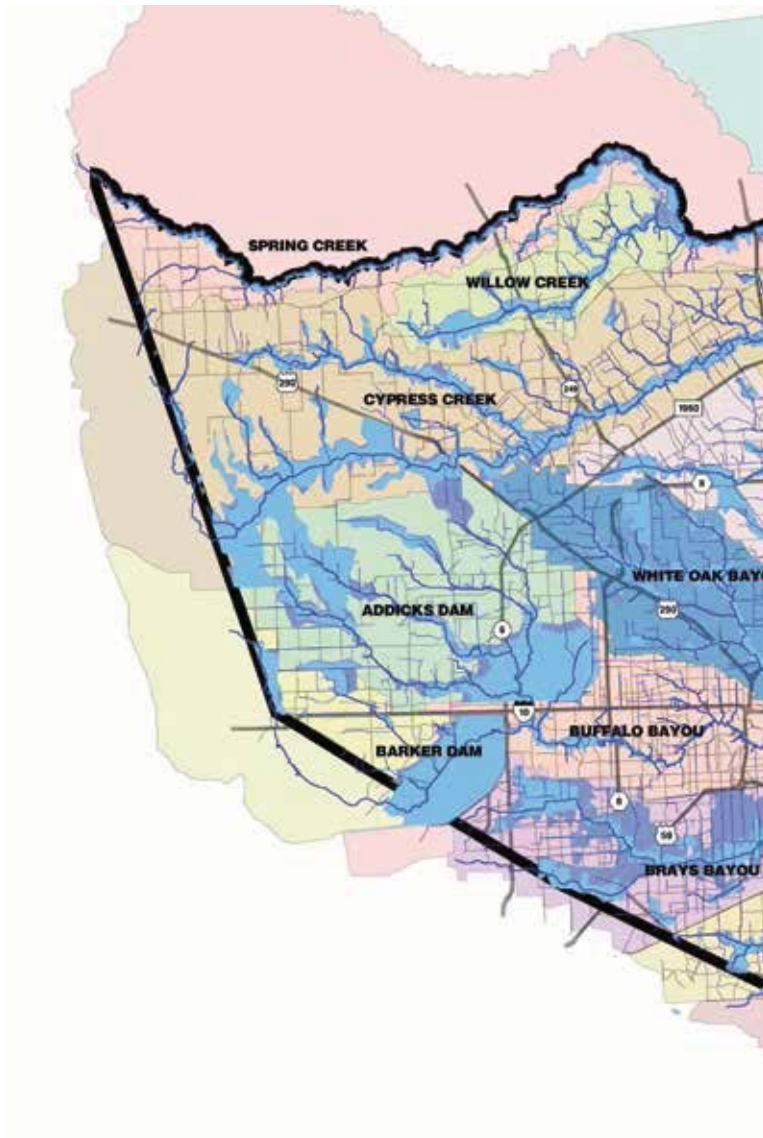
- Alamo Vine – *Ipomoea sinuata* 80
- Blue Jasmine – *Clematis crispa* 80
- Carolina Jessamine - *Gelsemium sempervirens* 80
- Coral Honeysuckle - *Lonicera sempervirens* 81
- Crossvine – *Bignonia capreolata* 81
- Muscadine Grape – *Vitis rotundifolia* 81
- Passionflower Vine – *Passiflora incarnata* 82
- Purple Leather Flower – *Clematis pitcheri* 82
- Trumpet Vine – *Campsis radicans* 82
- Virginia Creeper - *Parthenocissus quinquefolia* 83

WETLAND PLANTS

- Bulltongue – *Sagittaria lancifolia* 83
- Common Cattail - *Typha latifolia* 83
- Crinum Lily – *Crinum americanum* 84
- Fanwort – *Cabomba caroliniana* 84
- Floating Primrose – *Ludwigia peploides* 84
- Giant Bulrush – *Scirpus californicus* 85
- Golden Canna – *Canna flaccida* 85
- Hornwort – *Ceratophyllum demersum* 85
- Horsetail Reed – *Equisetum hyemale* 86
- Lemon Bacopa – *Bacopa caroliniana* 86
- Lizard’s Tail – *Saururus cernuus* 86
- Maidencane – *Panicum hemitomon* 87
- Pink Smartweed – *Polygonum pensylvanicum* 87
- Powdery Thalia – *Thalia dealbata* 87
- Purple Pickerelweed – *Pontederia cordata* 88
- Salt Marsh Mallow - *Kosteletzkya virginica* 88
- Smartweed – *Polygonum hydropiperoides* 88
- Smooth Water Hyssop - *Bacopa monnieri* 89
- Soft Rush – *Juncus effuses* 89
- Soft-Stem Bulrush – *Scirpus tabernaemontani* 89
- Southern Blue Flag Iris – *Iris virginica* 90
- Spider Lily – *Hymenocallis liriosme* 90
- Water Canna – *Canna glauca* 90
- Water Willow – *Justicia americana* 91
- White Topped Sedge – *Rhynchospora colorata* 91
- White Water Lily – *Nymphaea odorata* 91
- Yellow Water Lily – *Nymphaea mexicana* 92
- Yellow Water Lotus – *Nelumbo lutea* 92
- Zig Zag Iris – *Iris brevicaulis* 92

NOTES & PLANNING

HARRIS COUNTY WATERSHED MAP





Agenda Briefing

Date of Meeting: April 4, 2024

Responsible Department: City Secretary's Office

Presenter:

Briefing Prepared By:

Strategic Focus Area:

General Information:

Report from the Committee Chair on the status of a list of proposed actions taken by the Open Space and Trails Committee and forwarded to City Council for its action or review
- *Chair Comeaux*

Executive Summary / Background:

Funding / Fiscal Information:

Supporting Materials Attached: None

Prior Action / Review by Council, Boards, Commissions:

Staff Recommendation: