APPENDIX D: VEGETATION


Muhly grass in rain garden at Donald E. Davis Arboretum; Auburn, AL

Native plant lists for low impact development (LID) practices are located in each chapter along with planting density suggestions and design ideas where appropriate. This chapter explores common characteristics and helpful hints in getting to know why and what species have been included in this handbook.

Native plants are recommended for use in LID practices for both practical and ecological reasons. Alabama native plants are indigenous to the Southeast and occur in the wild without human interaction. This handbook makes use of the United States Department of Agriculture (USDA) plant database (www.plants.usda.gov) to categorize plant species as native or nonnative. Plant selection is often specific to goals of the site and practice. For example, aesthetics and plant availability combined with sunlight and water requirements may limit the use of native plant species for a specific site. In general, native plants are recommended for LID practices, but nonnative plants are acceptable as long as they are not considered to be invasive.

Nutrient Removal

Plants used in LID practices absorb nutrients in stormwater runoff to reduce pollutant loads. Nutrient removal through plant uptake is generally a secondary form of pollutant removal for LID practices. The primary form of pollutant removal occurs through microbial (biological) activity or chemical processes in the soil or growing substrate. As such, the rhizosphere should provide adequate habitat for microorganisms to reduce nutrients loads. A mixture of evergreen and deciduous vegetation is recommended for year round nutrient uptake.

Nutrient Release: There have been some concerns expressed over nutrients released from plants, or discharged, back into systems at the end of the growing season when plants undergo dormancy, especially in constructed stormwater wetlands. When this may be of concern, it is suggested that herbaceous perennials be used because these plants can effectively be harvested (to remove nutrient-laden plant tissues) at the end of the growing season. New tissue will be produced and arise from the root ball the following spring.

Design Considerations

Planning: Client preferences for each project site can determine plant sizes and types, which can limit plant choices for particular sites. For example, if visibility is a concern, plant selection may be limited to low-growing vegetation. Sunlight and hydrologic conditions present on site may also create constraints. Making a list of constraints for the project site and the LID practice you are considering is useful to outline characteristics of plants required. In some cases, native plant species are unavailable or do not fit the site goals and using ornamental nonnative plants is acceptable as long as they are not invasive.

Plant Spacing: Plant spacing should always be based on mature plant size. Some plants work well in mass plantings and should be planted on a tighter spacing pattern. Over time, these plants will create a dense grouping. Resist the urge to crowd plants because it is more expensive and also leads to competition among plants for water, nutrients, and sunlight, which causes stress and weakens plants making them more susceptible to insect and disease infestations.

Plant Preferences: Plants should be specified in the LID practice according to their sunlight preference, water inputs, soil type, and drainage. Plants should always be grouped based on similar preferences to reduce maintenance costs associated with any type of irrigation needed during establishment and plant replacement. For more information on planting the right plant in the right place, see the Alabama Smart Yards Manual at http://www.aces.edu/pubs/docs/A/ANR-1359/ANR-1359.pdf.

Sun – at least 6 hours of full sun per day.

Part Shade – 3 to 5 hours without direct sun per day.

Shade – less than 2 hours of direct sun per day.

Vegetation Plan: A vegetation design for LID should be made to scale to ensure that mature plants sizes are taken into account (for more information, see Chapter 4.1 on Bioretention). Calculating plant quantity is another acceptable form of determining plant placement, although it may not be as precise as a sketch drawn to scale (see Chapter 5.1 on Rain Gardens for information on plant quantity calculations).

Students install plants in bioretention area; Phenix City, AL

Plant Habit

For the purpose of this manual, plant habits, or vegetation types, include herbaceous perennials and grasses, turfgrass, shrubs, and trees.

Herbaceous Plants: Herbaceous perennials, grasses, and turfgrass do not form woody tissue, and instead typically have soft, fleshy tissue. Herbaceous plants are dormant during winter months when they die back to ground level. These plants may be short or long lived ranging from several years to decades based on the species.

Woody Plants: Trees and shrubs are woody plants that form bark and hold woody plant parts above ground. Trees have a central axis and are at least 6' tall (usually much taller), but shrubs are multi-stemmed (i.e. branched from the ground level) and typically smaller than trees. "Small trees" are < 20' tall. Evergreen is a term that refers to a woody plant that remains green and retains leaves throughout the entire year, which is the opposite of deciduous plants that are leafless during winter months.

Installation and Establishment

Installation: Plants should be installed at the top or just above finished soil grade. Plants installed too deep are at risk for disease such as fungal root rot. Remediating compacted soils by breaking them up and amending with organic matter will help plant roots establish more quickly into the surrounding soil. Mulching is also important to improve water retention in the soil and reduce soil temperatures.

Time of Year: Summer plant installations use more irrigation for establishment due to hot weather and low rainfall conditions experienced in Alabama, while a fall planting allows for root growth over the winter prior to spring shoot flush. Spring planting dates are also acceptable, but may require more irrigation until establishment compared to fall planting.

Irrigation: Plants should be watered immediately after planting to reduce transplant shock, ensure soil contact with root ball, and aid in root growth and establishment.

Establishment: Plant establishment generally occurs in one growing season (or longer up to 3 years under extreme drought) depending on the time of year of installation, environmental conditions, and rate of plant growth. Post-transplant root growth is critical for plant survival. Note that drought tolerant plants are not immediately tolerant of dry conditions when planted, but will tolerate these conditions once established.

Calibrating Irrigation: Irrigation systems should be calibrated (see Alabama Smart Yards Manual, Chapter 3) to minimize excess irrigation applications.

Turfgrass

Turfgrass sod should be installed as soon as it is delivered, preferably in the early morning before temperatures rise. Refer to the Alabama Erosion and Sediment Control Handbook for more information on sod installation.

Irrigation: For June to September installation, newly planted turf should be irrigated at planting so that the surface does not dry out. Sod should be watered daily for the first one to two weeks to keep it evenly moist (unless rainfall occurs). As the sod begins to grow new roots, irrigation frequency can be decreased, but a larger volume of water should be applied at each watering. Rainfall should be supplemented so that turfgrass receives about 1 – 1.5" per week from all irrigation sources. Turfgrass sod planted during dormancy will require less irrigation for establishment. In some cases, a dormant planting will not need any supplemental irrigation because rainfall during these months is sufficient for turf to establish. However, dormant plantings may benefit from irrigation during spring months when

sod begins to produce new growth (i.e. spring green up).

Plant Sizes

Plant size or maturity of plants used in LID practices are usually driven by economics and time of year.

Containers: Container plants are available in a wide variety of sizes; plugs, 1-gallon, and 3-gallon containers are most commonly used. Larger container plants have the advantage of establishing at any time of the year. Because container substrates can dry more quickly in the landscape, irrigation should be concentrated on the root ball of container plants after planting.

Plugs: Plugs are usually 2 or 3" pots containing a 4" tall plant and are most common for herbaceous plants. This size is ideal when large quantities are planted (e.g. constructed stormwater wetland) due to ease of installation. Plugs can be installed at any time of year, but spring is best since these are very young, small plants.

Bare Roots: Bare root seedlings are an inexpensive option for planting woody plants, but can only be installed during winter months when plants are dormant. Under the right environmental conditions, establishment and cover of bare root seedlings is comparable to container plants after several growing seasons. Upon arriving, bare root seedlings should be inspected for mold and mildew; if roots smell rotten or sour, are powdery, or dry, then the seedlings are likely diseased and should not be planted.

Storing Bare Roots: Bare root seedlings can be stored in a cooler or "heeled in" by digging a V-shaped trench in a moist, shady area. A 10' long trench can hold approximately 1,000 seedlings if they are cut out of the bundles and not overcrowded. The ideal temperature range for storing bare root seedlings is 35 – 38 °F. Seedling roots should be completely covered by backfilling the trench with soil and then watering. Plant bare root seedlings before new leaves

Table D.1
Plant Size Summary Table

Type	Time of Year for Install	Advantages	Disadvantages
Plug	Any but Summer	- Inexpensive - Easy to install	- Limited species availability - Limited plant nurseries carry them
Bare Root	Winter	- Inexpensive - Reduced irrigation needed because they are installed in the dormant season with typically wet weather conditions - Less root injury - Easy to install - Roots can be inspected at planting	- Limited plant nurseries carry them
Container	Any	- Inexpensive - Reduced irrigation needed because they are installed in the wet season - Less root injury - Easy to install - Roots can be inspected at planting	- limited to winter installation - Must store in ground or in cooler until planting - Roots lost or severed in harvest
B & B	Any but Summer	- Larger trees available - Can match soil types if bought locally to ease transplant shock	- Reduced root systems need lots of water

Powell, 1997; West et al., 2005, KSU

appear for better survival. Planting bars or dibble-bars can be used to install bare root seedlings with non-spreading root systems; plants with spreading root systems should be planted using a round shovel.

Cost: Bare root seedlings range from $ 0.20 to $ 0.50 each compared to 1-gallon containers, which may range from $2.50 to $5.00+. Plugs can range from $ 0.50 to $ 1.00.

Seeding

Seeding can be utilized for temporary or permanent cover of bare soil. Seed type and species are dependent on time of year and location within the state of Alabama.

Temporary Seeding: Temporary seeding for erosion control is mandatory on bare soil during construction and guidelines set forth in the Alabama Erosion and Sediment Control Handbook should be followed.

Permanent Seeding: Permanent seeding can be utilized when immediate stabilization is not required. Permanent seeding may be appropriate for riparian buffers (i.e. in areas where seeds will not be washed away), but seeding is not usually recommended for LID practices that are expected to function immediately after they are installed.

Erosion Control Blankets: Erosion control blankets such as a coconut or straw blend blankets are placed over seed and straw to stabilize soil while seeds become established.

For more information on seeding and erosion control blankets, please see the Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas (http://swcc.alabama.gov/pages/erosion_handbook.aspx).

Pure Live Seed: If seeding is chosen as a method of planting, pure live seed (PLS) should be used to adjust seeding rates to achieve a desired plant density. Seeding at too high of a density results in competition for water, nutrients, and sunlight, while seeding at low density can result in invasive plant invasion or decreased cover. Pure live seed expresses seed quality and is the percentage of seed per pound of seed applied that has the potential to germinate (excluding inert material and defunct seeds). Most seeding rates are expressed in pounds of PLS per acre and thus, the following calculation is necessary.

To calculate Pure Live Seed (PLS):

Pounds PLS = number of pounds / percent live seed

Percent live seed = germination percent – inert material percent

For example, to plant 10 lbs PLS of a species with 80% germination and 10% inert material

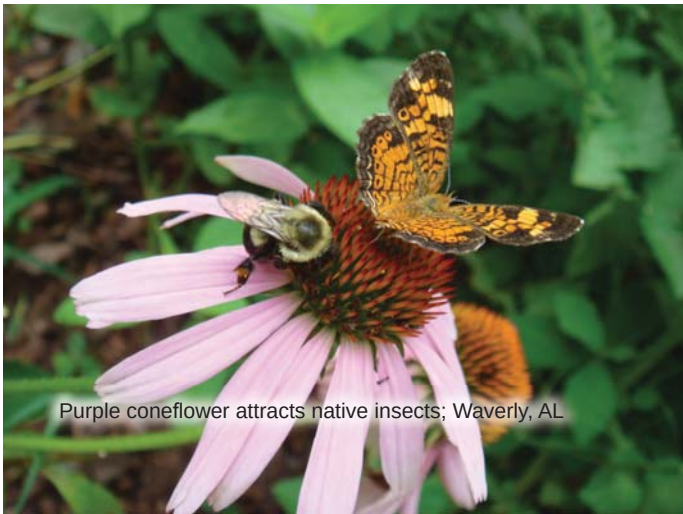
$$10\ lbs\ PLS = \frac{10\ lbs}{(80\%-10\%)} = \frac{10\ lbs}{0.70} = 14.3\ lbs$$

14.3 lbs of seed would be needed to adjust the seeding rate.

Native Plant Benefits

- Encourage diversity of insects, wildlife, and other plants
- Adapted to local environmental conditions and are considered to be low maintenance
- Require less pruning
- Can persist under drought conditions once established
- Tend to withstand lower water inputs because they are adapted the local climate and precipitation patterns of a given area
- Local or already acclimated native plant seedlings are recommended and will perform better

Wildlife Habitat: Plants are sources of food and shelter for wildlife. Birds, small mammals, and other wildlife consume plant fruits and seeds; thus, animal populations are directly related to diversity of plant communities. Shelter is provided both in and under tree and shrub canopies with taller native grasses providing ground-roaming small mammals with overhead cover to travel protected from predators and weather. Native plants are the preferred host for bees, butterflies, and moths. They are easy to establish, low maintenance once established,



Purple coneflower attracts native insects; Waverly, AL

and serve as hosts to native insect communities.

Nonnative, Invasive Plants: Nonnative, invasive plants should never be intentionally planted or introduced into landscapes. Unfortunately, most nonnative, invasive plant species have been introduced through the ornamental plant trade and may go unnoticed as problematic for decades or until the negative ecological impacts can no longer be ignored. For example, Chinese privet (*Ligustrum sinense*) was introduced in the 1850s to the U.S. as an ornamental hedge from China; today Chinese privet has become naturalized throughout the Southeast and threatens riparian ecosystems. Homeowners are often surprised when plants become invasive in their own landscapes or when they find these plants have escaped to their neighbor's yard. Nonnative, invasive plants are able to thrive in a variety of conditions such as land disturbance, low nutrient availability, herbivory, grazing, available water, and sunlight exposure making them prone to outcompete native plants. Many nonnative plants become invasive in the U.S. because their native insects and natural enemies are no longer present to keep them in check. Nonnative invasive plants alter plant communities and successional patterns through competition and displacement of native plant species. Other negative consequences include habitat loss, breeding site loss, and alterations to food webs. Nonnative invasive plants spread easily through suckering roots, abiotic (wind or water) and biotic (by animals) seed dispersal, and through other methods of self-propagation, which make these species difficult to control. For more information on controlling nonnative invasive plants see Invasive Plant Removal.

Plants for Low Impact Development

Once established, plants in LID practices should require little maintenance. Turfgrass in pretreatment areas or as part of the LID practice will require some mowing during the growing season and this frequency is site-specific and depends on preferred aesthetics. Native plants are recommended in LID practices because they are low maintenance, sustainable, and already adapted to environmental conditions experienced in these practices. All plants need irrigation until established or if there is a severe drought, but once established, these plants should rely solely on stormwater received.

Sustainability: Native herbaceous perennial plants are sustainable because they usually reseed themselves or spread by vegetative offsets to maintain landscape cover over time. Although native seed plantings may be slow to establish and more expensive compared to nonnative plants, their persistence makes them a cost effective choice.

Wildlife Value: Some LID practices have high wildlife value, provide habitat, and have the added benefit of serving as wildlife corridors that allow for microcosms of plant and animal diversity. These areas provide links between undeveloped land and developed land to balance ecosystems in the face of urbanization and expansion to connect otherwise fragmented native forested areas and landscapes.

Cultivars: Many nurseries may grow native plant cultivars instead of the original plant species because that is what the market currently demands. One criticism is that cultivars of native plants have been mass-produced and lack any genetic diversity. Consider goals of the site or project to determine whether a straight species or a cultivar is appropriate. In a constructed stormwater wetland, genetic diversity and species richness can be prioritized to enhance habitat, insect, and animal diversity. However, in commercial or residential settings, native plant cultivars may be preferred due to specific ornamental qualities they possess. Practices such as bioretention areas, rain gardens, or swales may also utilize a cultivar due to sight or sizing constraints of the site.

Screening Plants: Plant trials or screenings of vegetation in Alabama LID practices are advised to provide sound plant recommendations. Specific soil types and textures as well as local microclimates on site may affect performance of vegetation.

American beautyberry, Smiths Station, AL

Drought Tolerance

In addition to experiencing repeated flood events in LID practices, plants may also be exposed to extended periods of drying in practices such as bioretention, swales, and rain gardens to name a few. LID vegetation should provide evaporative cooling effects as well as maintain plant growth and vigor.

Visual Quality: Many LID practices are in high visibility areas, especially in municipal, commercial, or residential community settings, so plants in these practices need to maintain visual quality. Drought tolerant plants have the ability to maintain photosynthesis and transpiration

during a drought and this allows them to continue to efficiently produce carbohydrates necessary for growth, which correlates to plant survival and recovery following a drought.

Evapotranspiration: Evapotranspiration is the combination of water lost from the soil through atmospheric evaporation and water lost from the plant leaves through transpiration. LID emphasizes the importance of evapotranspiration for cooling. It is estimated that about 10% of water in the atmosphere is a result of plant transpiration. In an undeveloped watershed, approximately 50% of precipitation is evapotranspired, while only 30% of is evapotranspired in an urbanized watershed. Thus, the use of LID aims to increase evapotranspiration in urban settings to bridge the gap in evapotranspiration rates.

Transpiration Rates: Transpiration rates vary depending on plant species, season, and plant size. During the dormant season, plants do not require as much water and thus, evapotranspiration is decreased. Larger plants will use more water than smaller ones. For example, a large oak tree may transpire up to 40,000 gal of water per year

Additional Information: To ensure that the plants selected are appropriately drought tolerant, consult plant lists in this handbook, review information on plants labels, plant books, or online. Be advised that you may find conflicting information. It is best to seek an information source that is Alabama specific such as the Alabama Plant Atlas (http://www.floraofalabama.org/). The Alabama Cooperative Extension System will often have the information you are looking for, visit online at www.aces.edu. More information on drought tolerant plants for Alabama can be found at http://www.aces.edu/pubs/docs/A/ANR-1336/ANR-1336.pdf. If you cannot find the information you need from a credible Alabama source, seek information from other Southeastern states with reputable plant science or horticulture departments.

Flood Tolerance

Constructed stormwater wetlands and wet swales require plants that are tolerant of flooded conditions.

Flood Stress: Under flooded conditions, oxygen is decreased because soil pores fill with water. Oxygen is slow to diffuse in water causing an oxygen deficiency resulting in anaerobic (without oxygen) soil conditions. The length of time necessary for anaerobic conditions to occur varies from several hours to a few days and is dependent upon temperature, amount of organic materials in the substrate to be consumed by microbes, and the chemical demand of ions in the soil.

Anaerobic Conditions: Anaerobic conditions are particularly harmful because oxygen is required for root respiration to maintain healthy root tissue and produce new root growth. When oxygen is absent, ions present in the soil become reduced and can be toxic to plants. Wetland plants and flood tolerant plant species adapt to these conditions to transfer oxygen to roots. In doing so, these plants produce oxidized linings around their roots to protect them from reduced ions that may be toxic.

Wetland Plants

Wetland plants are adapted to low oxygen (hypoxic) or no oxygen (anaerobic) conditions where non-wetland adapted vegetation would not survive.

Adaptations: Plants acclimated to flooding usually develop some type of physical adaptations such as lenticels, adventitious roots, surface rooting, shallow root systems, pneumataphores (cypress knees), or aerenchyma tissue. Plants may develop shallow root systems or adventitious roots in the top few millimeters of soil to avoid anaerobic conditions in deeper soil layers. The thickness of the aerated surface soil depends on oxygen transfer from the atmosphere to the soil water surface. Adventitious roots grow on lower stem portions to avoid low oxygen soil layers and to anchor plants. Most flood tolerant plants will exhibit at least some of these adaptations when planted in a constructed stormwater wetland. It is important to understand that all plants cannot tolerate inundated conditions. For more information on specific flood tolerant plants for Alabama, see the Vegetation List in Chapter 4.2 on Constructed Stormwater Wetlands.


Aquatic plants in a wet swale; Auburn, AL

Aquatic Plants: Aquatic plants are used in deep pools of constructed stormwater wetlands. These plants are found growing in areas where standing water is present. Aquatic plants are adapted to living under continuous inundated conditions and grow either partially or totally in water. Similarly to terrestrial plants, aquatic plants require sunlight, water, carbon dioxide, and oxygen. These plants are a valuable source of oxygen and carbohydrates to

animals such as fish and other organisms in and around water.

Many aquatic plants grow in shallow water and can be separated into three groups: emergent, floating leaf plants, and completely submersed.

Emergent Plants: Emergent plants grow in the shallowest water and are rooted in substrate or sediment. Their leaves are held above the water surface. Some examples include pickerel weed, lotus, lizard tail, and arrow arum. Emergent plants are very productive and play a vital role in nutrient cycling and pollutant removal.

Floating Leaf Plants: Floating leaf plants grow at intermediate water depths and may or may not be rooted in sediment. The entire plant may float. Leaves are held at the water surface. An example is water lily.

Submersed Plants: Submersed plants grow completely in the water column and do not have any portion exposed to the atmosphere. These plants are rooted in the sediment. An example is pondweed. Submersed plants need clear water to flourish since suspended sediments in the water column will inhibit light penetration.

Wetland Indicator Status

Wetland indicator status (WIS) can be an excellent guide for moisture conditions preferred by plants in their native habitats. WIS is a helpful designation for plants to define their designation as a hydrophyte, non-hydrophyte, or both. A hydrophyte is defined as plant that is water loving and flood tolerant. Conversely, a non-hydrophyte does not tolerate waterlogged conditions and is not considered flood tolerant.

The National Wetland Plant List has recently been revised by the U.S. Army Corps of Engineers (USACE) based on these designations.

- Obligate (OBL): almost always is a hydrophyte, rarely in uplands
- Facultative Wet (FACW): Usually is a hydrophyte, but occasionally found in uplands
- Facultative (FAC): Commonly occurs as either a hydrophyte or non-hydrophyte
- Facultative Upland (FACU): Occasionally is a hydrophyte, but usually occurs in uplands
- Upland (UPL): Rarely is a hydrophyte, almost always in uplands

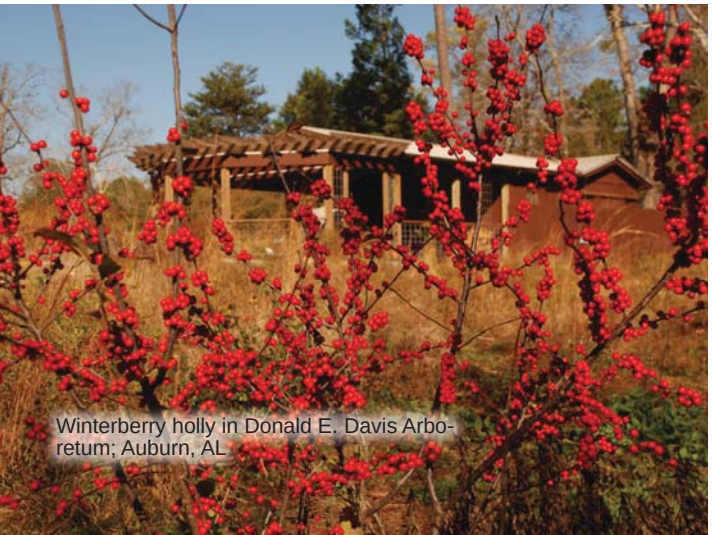
Wetland Indicator Status Lists: These lists are available by ecological region. There are two lists for Alabama, which are the Eastern Mountains and Piedmont and the Atlantic Gulf Coastal Plains. The Alabama lists can be found at: http://rsgisias.crrel.usace.army.mil/NWPL_CRREL//docs/lists//State/AL.pdf. These wetland plant designations are included in the Alabama Native Plant List for this handbook found in Appendix X.

For more information, please see the National Wetland Plant List (http://rsgisias.crrel.usace.army.mil/apex/f?p=703:1).

Use Where Appropriate: Constructed stormwater wetlands use plants from each of the wetland indicator status categories due to the different zones of hydrology. Bioretention cells, rain gardens, and bioswales require plants that are both flood and drought tolerant and may use facultative plants that tolerate alternating hydroperiods in both wetland and non-wetland situations.

Botanical Names

Each plant has been assigned a Latin binomial botanical name consisting of both a genus and specific epithet (collectively known as the species). When ordering plants from a nursery or distributor, refer to plants by their botanical name to reduce the chance of confusion between you and the nursery grower. Referring to plants by their common name is risky since many plants share the same common name, but no two plants share the same botanical name.



Winterberry holly in Donald E. Davis Arboretum; Auburn, AL

Correct Citation: The entire botanical name is underlined or italicized. The genus is capitalized; the species is not. An example is *Coreopsis tinctoria*. *Coreopsis* is the genus and has many species within it (e.g. *Coreopsis nana*, *Coreopsis lanceolata*, etc.), but *tinctoria* is the species, and there is only one *Coreopsis tinctoria*. The cultivar name follows the species name, is not italicized, but is capitalized, and placed in single quotes. *Coreopsis tinctoria* 'Tiger Stripes' is an example of a cultivar.

Male and Female Plants

When a plant species does not produce "perfect" flowers (both male and female flower parts in the

same flower), that plant species is classified as either monoecious or dioecious. Knowing whether a plant is monoeious or dioecious is important when using plants for ornamental fruit characteristics.

Monoecious: Monoecious means “one house” meaning that male and female flowers occur on the same plant.

Dioecious: Dioecious means “two houses” meaning that one plant has male flowers (a male plant) and one plant has female flowers (female plant). For dioecious plants, you must have both a male and female plant for pollination, fertilization, and fruit production to occur on female plants.

Ornamental Fruit Production: When ornamental fruit production is desired for dioecious plants, often one or two male plants are placed out of sight with female plants placed in front for fruit bearing. For example, *Ilex verticillata* (winterberry holly) needs a male pollinator plant no more than 50’ away and one male plant is sufficient for 10 to 20 female plants. The nursery or grower should be able to provide you with the information necessary to ensure fruit production on dioecious plants.

Vegetation Maintenance

Pruning

Most plants can be pruned once a year to maintain shape, but in some cases, plants may only need pruning every couple of years. Shrubs and other flowering plants should be pruned based on the May Rule.

May Rule: If a plant flowers before May, this means that the plant flowers on old wood and it should be pruned after it flowers. If pruned during the winter, the flower buds would be removed and thus, the plant would not flower that year. If a plant flowers after May, it should be pruned during the winter months because flowers are produced on new wood.

Herbaceous Plants: Stems and leaves of herbaceous perennials die back to ground level during winter months. Leaving the seed heads or spent flower heads may enhance visual winter interest and help encourage seed dispersal since many herbaceous perennials spread by seed. Birds may also eat plant seeds during the winter months and letting the seed heads persist can provide a valuable food source.

Mowing

Mowing should not be conducted immediately following a rain event or when the ground is wet. Mowing under saturated conditions can result in ruts caused by mower wheels or blades and this may inhibit flow patterns especially in pretreatment areas for SCMs where turfgrass is usually specified. Additionally, mowing in wet weather conditions may also cause areas of compaction that decrease functionality and can result in re-concentration of diffuse flow.

Native Grasses: Native grasses are generally mowed at greater heights once or twice per year to remove dead tissue before new growth occurs in early spring. Native grasses will not perform to their potential if mowed or disturbed too often. Mowing creates favorable conditions for exotic species (turfgrass) to outcompete native warm season grasses.

Turfgrass: Turfgrass requires mowing at least once a month (every other week is better) during the growing season. A general rule of thumb is never to remove more than one third of the leaf during mowing. Turfgrasses such as bermudagrass are stimulated to grow through the means of mowing and respond well to frequent mowing.

Thatch: The thatch layer in turfgrass is organic matter made up of stems and leaves that have not decomposed. Thatch develops between turfgrass foliage and the underlying soil layer. Thatch accumulation is increased with excess nitrogen application and infrequent mowing. Thatch build up inhibits water from soaking into soil layers below and can cause turfgrass to mimic an impervious surface, causing runoff. Even when thatch is moistened, it usually remains too wet for healthy grass growth.

De-Thatching: The thatch layer can be checked in September or October by using a knife or shovel to remove a piece or “plug” of grass and soil. Look beneath the turfgrass plants, thatch will be a dark brown to black color and should be easily distinguished from soil layers. When this layer builds to ¾” or greater, brown patches or spots may be noticeable and de-thatching is necessary. De-thatching should be done after spring green up in early summer from May to August using a vertical mower, power rake, or other spring attachment.

Invasive Plant Removal

Invasive plant species should be removed prior to construction of LID practices and, if possible, before seed production to prevent seeds from spreading during or after plant removal. A list of Alabama invasive plants can be found through the Alabama Invasive Plant Council (http://www.se-eppc.org/alabama/).

Mechanical

Mechanical removal of invasive plants includes hand pulling, digging, or the use of a weed wrench or other equipment. When removing invasive plants through mechanical means it is important to remove as much of the original root system as possible. Many invasive plants have the ability to regenerate from root fragments left behind.

Hand Pulling: Hand pulling is usually successful for small stands of weeds with stems less than 3" in diameter.

Equipment: Weed wrenches can be used for 3" or greater diameter trunks; these tools use leverage to remove above and below ground portions of invasive plants.

Erosion and Sediment Control: Mechanical removal usually causes some soil disturbance to areas making them vulnerable to invasion by other invasive plants. When removing invasives from large spaces, stabilization may be necessary using seed, straw, or other means (See the *Alabama Handbook for Erosion Control, Sediment Control, and Stormwater Management on Construction Sites and Urban Areas*).

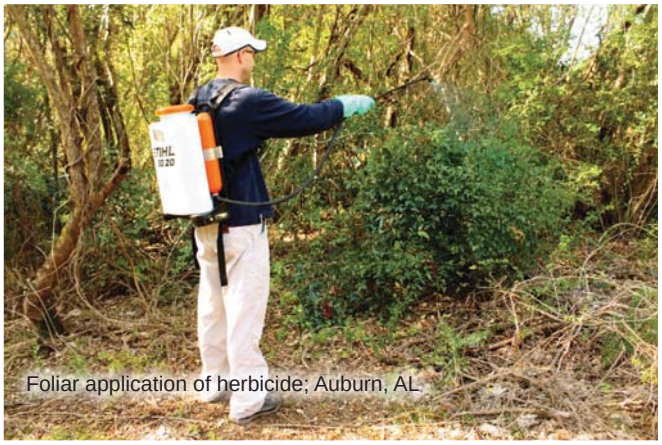
Chemical

Chemical control of invasive plants uses herbicides to manage target plants. Herbicide activity results in yellowing foliage, necrotic (blackened) spots, or necrotic margins and may take a month or longer. Reapplication should occur as new growth appears. There are many chemical treatments and choosing the best one is largely dependent on the target plant species for control.

Herbicide Dyes: Herbicide dyes are also helpful to prevent unneeded reapplication of the herbicide and to keep track of target plants.

Recommendations by Species: Many plant species have specific chemical recommendations and a recommended application window for best control. More information can be found in the Forest Service book, Nonnative Invasive Plants of Southern Forests: A Field Guide for Identification and Control (http://www.srs.fs.usda.gov/pubs/gtr/gtr_srs062/). A summary of chemical herbicide application methods can be found in Table D.2.

Cut Stump Treatments: Cut stump or stem treatments involve cutting an invasive plant stem down to the ground and then applying herbicide to the cut. This method is



Foliar application of herbicide; Auburn, AL.

Table D.2
Summary of Chemical Control Measures

Control Type	Size/Vegetation Type	Equipment	Time
Foliar	<8 ft tall nonevergreen woody or herbaceous	Back pack sprayer with metal tip	Mid summer through fall best, but anytime after leaf out is okay
Foliar	<8 ft tall woody evergreen or semi-evergreen	Back pack sprayer with metal tip	Winter
Cut stump or cut-stem	>0.5" diameter stem	Chainsaw, handsaw, or pruning shears and back pack sprayer or pressurized hand sprayer	Anytime, but later summer to fall is best
Basal bark	Any woody vegetation less than 6 to 8" in diameter	Back pack sprayer or handheld pressurized sprayer	Anytime, but late summer to fall is best

(Miller et al., 2010; Enloe et al, 2010)

recommended for low-density invasive species removal since the manual labor involved can be extensive when many stems require cutting. These treatments require higher concentrations of the active ingredient and should contain a minimum of 41% of the active ingredient. This method works best on stems that are greater than 0.5" in diameter. Stems should be cut close to ground level, but should still be visible so that you do not lose sight of them; however, in cases where reapplication may be necessary, it is best to cut down to 4 – 6" to leave room for additional cut stem applications in the case of re-sprouting. Herbicide can be applied directly to the cut on smaller stems using a sponge, paint brush, or spray bottle and should occur quickly after stem cuts are made to ensure effectiveness. However, for stumps greater than 6" in diameter, herbicide should be painted or sprayed all the way around the stump and to the areas immediately inside the bark. For more information, please refer to http://www.aces.edu/pubs/docs/A/ANR-1465/ANR-1465-low.pdf

Foliar Applications: Foliar applications are recommended for large monotypic stands of invasive plants and can be a selective or non-selective treatment. Selective treatments target specific invasives and can leave other plants unharmed, but non-selective herbicides (e.g. glyphosate) eradicate any vegetation where they are applied. Rain should not be forecast for the next 24 to 48 hours following foliar sprays. Foliar applications are recommended for nonnative invasive plants that are less than 8' tall; however, taller woody vines can be cut to 3 - 5' tall and treated below the cut or basal bark applications may be made. Foliar applications can be sprayed whenever leaves are present, but mid summer to late fall applications are most effective for woody plants. Applications made during winter or spring can be helpful to discourage seed formation and further invasion of plants. Basal bark applications are most effective on trees of 8' or less diameter breast height (dbh).

Basal Bark Application: Basal bark herbicide applications are appropriate for moderate to low-density nonnative invasive plant control. This method is selective and there is little danger of injuring adjacent vegetation. The application is made using a backpack sprayer and an herbicide-oil-penetrant mixture is applied to the lower stem or trunk of woody vegetation. For more information, refer to http://www.aces.edu/pubs/docs/A/ANR-1466/ANR-1466.pdf

Disposal: Invasive plants should be disposed of properly so that re-rooting does not occur. Weeds should not be pulled and then set immediately back on the ground, instead, weeds should be placed "head" first in the collection bag for disposal to avoid further spread of seeds or plant parts. Bagging on site is best so plant pieces are not spread to other sites. Soft tissue weeds can be placed in black or clear plastic heavy-duty garbage bags to be solarized (i.e. dried in the sun). Plastic sheeting or tarps can be used to dry plants between them, but this method may take several weeks to completely dry weeds. Burning is an acceptable form of disposal, but local codes and ordinances should be checked prior and be aware of some plants such as poison ivy that can cause irritation if inhaled. Composting is not recommended unless weeds are known not to reproduce vegetatively (i.e. through rooting of plant stems, etc.) or there are no flowers and/or seeds present.

Wetland Areas and Aquatic Invasives Control

Most aquatic invasive plants form dense canopies similar to terrestrial invasives plants. Flood prone areas are subject to invasion by invasive plant species that prefer those conditions. Aquatic invasive species should be controlled using a systemic herbicide specifically labeled for aquatic use. Some species can be controlled by water level or by creating conditions unfavorable to the species. Fpr example, cattails (*Typha latifolia*) can be controlled by deep flooding for several weeks during the growing season after stems have been cut. In some cases, the application of these herbicides may require a pesticide applicator's permit.

Native plant nurseries and resources

The following is a list of Southeast nurseries with native plant stock

- Biophilia, Elberta, AL, 251.987.1200, www.biophilia.net/
- Alabama Nurseries and Orchards, contact Larry Foster, 1.800.222.1280
- Joshua Timberlands, LLC., contact Sam Campbell, Elberta, AL, 251.986.5210
- Tom Dodd Nurseries, Semmes, AL, 1.800.866.3633
- Dodd and Dodd Nursery, Semmes, AL, 251.645.2222, www.doddnatives.com
- Cohn Flowers, contact Rebecca Cohn, 9549 Derby Dr., Birmingham, AL, 205.527.5431
- Mulberry Woods Nursery, Garden City, AL, 205.493.0861, www.mulberrywoodsnursery.com
- Blooming Colors, 1192 S. Donahue Dr., Auburn, AL 334.821.7929
- Nearly Native, 776 McBride Rd. Fayetteville, GA, http://www.nearlynativenursery.com
- Superior Trees, Lee, FL, http://www.superiortrees.net
- Mellow Marsh Farm, Siler City, NC, www.mellowmarshfarm.com
- Foggy Mountain Nursery, Lansing, NC, http://www.foggymtn.com

Table D.3
Alabama Native Trees, Shrubs, Herbaceous Perennials, and Ferns

Genus	specific epithet	Common Name	Sun	Moisture	Height	Bloom Season
Acer	*barbatum*	southern sugar maple	P	D	20 to 25'	spring
Acer	*negundo*	boxelder	S	W	30 to 50'	spring
Acer	*rubrum*	red maple	F	W-D	50-75'	spring
Acer	*saccharinum*	silver maple	F-S	W	50 to 70'	spring
Acer	*saccharum*	sugar maple	F-P	M	50-75'	spring
Achillea	*millefolium*	common yarrow	F-P	W	24 to 36"	spring-summer
Acorus	*calamus*	sweetflag	F-P	W-M	3-5'	summer
Actaea	*pachypoda*	doll's eyes	P-S	M-W	1-2'	spring
Actaea	*rubra*	red baneberry	P-S	M	1-3'	spring
Adiantum	*pedatum*	maidenhair fern	P-S	M	18-36"	N/A
Aesculus	*pavia*	red buckeye	S-P	D	10 to 20'	spring
Aesculus	*parviflora*	bottlebrush buckeye	F-P-S	M	6-12'	summer
Aesculus	*sylvatica*	painted buckeye	S-P	M	6-12'	spring
Aletris	*farinosa*	colic root	F	M-D	2.5-3'	summer
Allium	*canadense*	wild onion	PS	D	8-12"	summer
Alnus	*serrulata*	hazel or tag alder	F-P	W	40'	spring
Amelanchier	*arborea*	serviceberry	F-P	M-D	15-25'	spring
Amorpha	*fruticosa*	indigo bush	F-P	M-W	6-10'	spring to summer
Amsonia	*tabernaemontana*	blue star	F-P	M	2-3'	spring
Anemone	*virginiana*	thimbleweed	S	M	1-3'	summer
Antennaria	*plantaginifolia*	pussy's toes	F	M	.5-1'	spring to summer
Apios	*americana*	groundnut	S	W	vine	summer
Aquilegia	*canadensis*	wild columbine	P-S	M-D	1-2'	spring to summer
Aralia	*spinosa*	devil's walkingstick	F-P	M-D	10-20'	summer

Flower Color	Fall Color	WIS AGCP	WIS EMP	Comments
yellow/green	Y	NL	NL	yellow fall color, resistent to wind and ice
yellow, green, brown	N	FAC	FAC	attracts birds and Cecropia silkmoth, planted widely as a shade tree, fast growing, weak limbs
red	Y	FAC	FAC	Buds and young twigs are red/green, fall color
white, red, yellow	Y	FAC	FACW	fast growth rate, brittle branche, yellow, brown, to red fall color; attracts Cecropia silkmoth
yellow, green, brown	Y	FACU	FACU	Excellent fall color; beautiful large shade tree
white, pink	N	FACU	FACU	flower heads are compact clusters, fragrant foliage
yellow	N	OBL	OBL	perennial, rhizomatous, iris-like herb, grass like
white	N	FACU	UPL	Small white flowers Apr-May; poisonous white berries Aug-Sep
white	N	UPL	UPL	A bushy plant with large, highly divided leaves and a short, thick, rounded cluster of small white flowers
N/A	N	FACU	FAC	Tiny fan-shaped deep blue-green fronds held on black stems
red	N	FACU	FAC	It is normal for this plant to drop its leaves at the end of summer
white	N	NL	NL	A mound shaped thicket forming shrub with picturesque candelabra-like branching.
yellow/green	N	FAC	FAC	Large understory shrub in deciduous forests, unique pear shaped fruits
white	N	FAC	FAC	small white urn shaped flowers
white, pink	N	FACU	FACU	high deer resistance
red, green, brown	Y	FACW	OBL	Can fix nitrogen, yellow to red fall color
white	Y	FACU	FAC	Yellow/orange./red fall color; white flowers in April
purple and yellow	N	FACW	FACW	attracts lots of moths and butterflies
blue	N	FACW	FACW	Blue showy flowers in May
white	N	FACU	FACU	Lovely large white flowers followed by fluffy seed heads
white	N	NL	NL	Forms a low mat of little rosettes of white-wooly leaves
red, pink, and purple	N	FACW	FACW	climbing vine, may take over
red and yellow	N	FACU	FAC	Unique red & yellow flowers attract hummingbirds
white	N	FAC	FAC	Thorny; 3-4" clusters of wht flowers in sum.; birds like berries

Genus	specific epithet	Common Name	Sun	Moisture	Height	Bloom Season
Argemone	*albiflora*	bluestem prickly poppy	P	D	1-3'	spring to summer
Arisaema	*dracontium*	green dragon	P-S	M-D	28"	spring
Arisaema	*triphyllum*	Jack-in-the-pulpit	P-S	M	12"	spring
Aruncus	*dioicus*	goat's beard	F-P	M	4-7'	spring
Aronia	*arbutifolia*	red chokeberry	F	W-M	5'	spring
Arundinaria	*gigantea*	giant cane	P-S	M-W	6-25'	green
Asarum	*canadense*	wild ginger	P-S	M	6"	spring
Asclepias	*incarnata*	swamp milkweed	F-P	M-W	2-4'	summer to fall
Asclepias	*longifolia*	longleaf milkweed	F-P	M-W	1-2'	summer
Asclepias	*tuberosa*	butterfly weed	F	D	1-2'	summer
Asimina	*parviflora*	dwarf paw paw	P	D	6-8'	spring
Asimina	*triloba*	paw paw	P-S	M	40'	spring
Asplenium	*platyneuron*	ebony spleenwort	F-P	M	6-12"	N/A
Athyrium	*filix-femina*	lady fern	S	M-W	18-24"	N/A
Baccharis	*halimifolia*	sea-myrtle	P	W	6-12'	summer to fall
Bacopa	*monnieri*	water hyssop	F-P	M-W	1'	spring
Baptisia	*alba*	white wild indigo	F-P	D	2-4'	spring
Baptisia	*australis*	blue indigo	F	M-D	2-4'	spring/summer
Betula	*lenta*	sweet birch	F-P	M	40-55'	spring
Betula	*nigra*	river birch	F	M-W	40-70'	spring
Bignonia	*capreolata*	cross vine	F-P	M	vine	spring
Boltonia	*asteroides*	white doll's daisy	P	W	3-6'	summer/fall
Botrychium	*virginianum*	rattle snake fern	P-S	M	3'	spring/summer
Callicarpa	*americana*	American beautyberry	P	M	3 to 8'	summer
Calycanthus	*floridus*	sweetshrub	P-S	M	6-10'	summer
Camassia	*scilloides*	wild hyacinth	F-PS	M-D	1-2'	spring
Campanulastrum	*americanum*	American bellflower	P	M	3-4'	summer
Campsis	*radicans*	trumpet creeper	F	M-D	vine	summer

Flower Color	Fall Color	WIS AGCP	WIS EMP	Comments
white	N	NL	NL	plant parts toxic to humans
yellow, green	N	FACW	FACW	Similiar to Jack-in-the-pulpit; goes dormant mid-summer
green, purple, brown	N	FACW	FACW	Spathe appears Mar-May; red berries late summer, fall
cream	N	FACU	FACU	Feathery plumes of cream-colored flowers rise above foliage
white	Y	NL	NL	
spring	N	FACW	FACW	Rarely flowers; wood stems, spreads by rhizomes
red brown to purple	N	UPL	FACU	Evergreen groundcover with heart-shaped glossy leaves
pink	N	OBL	OBL	attracts butterflies and hummingbirds
white	N	FACW	OBL	grows from a taproot
orange	N	NL	NL	Clusters of brilliant orange flowers Jun-Aug
maroon	N	FACU	UPL	maroon axiallry flowers in mid-March, high dry sites
maroon	Y	FAC	FAC	Unique fruit resembles & tastes like banana, light green to yellow fall color; attracts butterflies and moths
N/A	N	FACU	FACU	stalk turns shiny black with age
N/A	N	FAC	FAC	Delicate & lacy arching fronds have dark red stems at maturity
white	Y	FAC	FACW	White to green flowers occur in small dense terminal clusters.
white	N	OBL	OBL	attracts butterflies
white	N	FACU	FACU	leaves turn black in the fall
blue-violet	N	NL	FACU	if started from seed, plants will not flower for 3 years
yellow, green, brown	Y	FACU	FACU	Golden-yellow fall color
green and brown	Y	FACW	FACW	Modest yellow fall color; seed attracts birds
red, yellow	Y	FAC	FAC	reddish purple fall color
white	N	FACW	FACW	Broad flat clusters of generally small flower heads
n/a	N	FACU	FACU	requires more care than other ferns
white, pink	N	FACU	FACU	Axillary berries in fall attract over 40 birds species
brown, maroon	N	FACU	FACU	Interesting brown blooms Apr-July
blue/lavender	N	FACW	FAC	A leafless stem with lavender to blue flowers in an elongated, loose-flowered cluster
blue/purple	N	FAC	FACU	attracts hummingbirds
red, orange, yellow	N	FAC	FAC	A high-climbing, aggressively colonizing woody vine to 35 feet with showy flowers.

Genus	specific epithet	Common Name	Sun	Moisture	Height	Bloom Season
Carex	*comosa*	bottlebrush sedge	F-P	W	3.5'	summer
Carex	*crinita*	fringed sedge	P	M-W	2'	summer
Carex	*lupulina*	hop sedge	P	W	3'	summer
Carex	*lurida*	shallow sedge	F-P	W	2.5'	summer
Carex	*stricta*	tussock sedge	F	M-W	3'	summer
Carex	*tribuloides*	blunt broom sedge	F-P	M-W	3'	summer
Carya	*cordiformis*	bitternut hickory	F-P	M	50-70'	spring
Carya	*glabra*	pignut hickory	F-S	D	50-60'	spring
Carya	*illinoinensis*	pecan	F	M	70-100'	spring
Carya	*ovata*	shagbark hickory	F-S	M-D	60-80'	spring
Carya	*tomentosa*	mockernut hickory	F-S	M-D	50-60'	spring
Castanea	*pumila*	chinquapin	F-S	M	20-25'	spring
Catalpa	*bignoniodes*	southern catalpa	P	M	25-40'	spring
Caulophyllum	*thalictroides*	blue cohosh	P-S	M-W	1-3'	spring
Ceanothus	*americanus*	New Jersey tea	F-P	D	3'	summer
Celtis	*laevigata*	sugar hackberry	F-P	M-D	60-80'	spring
Celtis	*occidentalis*	common hackberry	F	M-D	40-60'	spring
Cephalanthus	*occidentalis*	buttonbush	P-S	M-W	6-12'	summer
Cercis	*canadensis*	Eastern redbud	F-S	M-D	20-30'	spring
Chamaecrista	*fasciculata*	patridge pea	F-P	M-D		summer
Chasmanthium	*latifolium*	river oats	P-S	M	2'	summer
Chelone	*glabra*	white turtlehead	F-S	M-W	1-4'	summer
Chelone	*lyonii*	pink turtlehead	F-P	M-W	24-30"	summer
Chionanthus	*virginicus*	fringetree	F-P	M	12-20'	spring
Chrysogonum	*virginianum*	green-and-gold	P-S	M	8"	spring/fall
Cimicifuga	*racemosa*	black cohosh	P-S	M	1-3'	summer/fall
Cirsium	*discolor*	field thisttle	F	D	3-6'	summer

Flower Color	Fall Color	WIS AGCP	WIS EMP	Comments
green	N	OBL	OBL	Prefers mucky soils; a more cultivated sedge variety that can be used in wet rain gardens
green	N	FACW	OBL	grass like evergreen; seeds eaten by waterfowl; transplants easily
green	N	OBL	OBL	spreads by rhizomes; will grow on the edge of streams or ponds
green/yellow	N	OBL	OBL	attracts birds
yellow	N	OBL	OBL	attracts birds, butterflies, and moths; nesting habitat for rails and snipes
green and brown	N	FACW	FACW	Tolerates gravelly and mucky substrates
yellow, green, brown	Y	FAC	FACU	Striking yellow buds; pinnately compound leaves, yellow fall color
yellow, green, brown	Y	FACU	FACU	Golden-yellow fall color; rapid growth rate
yellow	N	FACU	FACU	The largest of the hickories and one of the most valuable cultivated plants origninating in North America.
green, brown	Y	FACU	FACU	golden yellow fall color
yellow, green, brown	Y	NL	NL	golden yellow fall color
white	Y	NL	NL	Slender spikes of strongly scented staminate flowers; yellowish purple fall color
white	N	UPL	FACU	Short crooked branches with heart shaped leaves and clustered flowers.
green	N	NL	NL	Green flowers Apr-May; blue poisonous berries
white	N	NL	NL	Short spikes of tiny white flowers in June
green	N	FACW	FACW	attracts butterflies and moths
green, brown	N	FACU	FACU	attracts butterflies and moths
white	N	OBL	OBL	used for live stakes; attracts birds and butterflies
pink	N	UPL	FACU	Clusters of rosy/pink flowers (Apr); flowers line branches/trunk
yellow	N	FACU	FACU	Seeds are eaten by song and game birs; flowers attract bees and butterflies; an annual that is great used in a mix for stream enhancement projects
green, brown	Y	FAC	FACU	Yellow fall color, perennial grass, clump forming with oat like flowers
white	N	OBL	OBL	Terminal clusters of white and lavendar tinged two lipped flowers; attracts butterflies and hummingbirds
pink	N	FACW	FACW	Showy pink flowers July-Sept
white	N	FACU	FAC	Wispy, creamy wht. fragrant flowers in May
yellow	N	NL	NL	Yellow flowers contrast green foliage in spring & fall
white	N	NL	NL	Slender candle-like clusters of white slowers in summer & fall
pink/purple	N	UPL	UPL	attracts butterflies and seeds attract birds

Genus	specific epithet	Common Name	Sun	Moisture	Height	Bloom Season
Cirsium	*muticum*	swamp thistle	F	W	2-7'	summer
Cladrastis	*kentuckea*	yellowwood	F-P	M	30-50'	spring
Claytonia	*virginica*	springbeauty	P	M	4-12"	spring
Clematis	*crispa*	blue jasmine	F-P	M-W	vine	spring/fall
Clethra	*acuminata*	cinnamonbark	F-P	M	8-15'	summer
Clethra	*alnifolia*	summersweet clethra	F-P	M-W	6-12'	summer
Cliftonia	*monophylla*	buckwheat brush	F	W	12-18'	spring
Clinopodium	*coccineum*	scarlet calamint	F-P	D	1-3'	spring/ summer/fall
Commelina	*erecta*	whitemouth dayflower	P	D	1-3'	summer/fall
Conoclinium	*coelestinum*	mistflower	F-P	M	3'	summer to fall
Coreopsis	*auriculata*	mouse-eared coreopsis	F	M	18"	spring
Coreopsis	*basalis*	goldenmane tickseed	F	D	15"	summer
Coreopsis	*lanceolata*	tickseed	F	M-D	1-2.5'	spring
Coreopsis	*nudata*	Georgia tickseed	P	W-M	3-5'	spring
Coreopsis	*pubescens*	star tickseed	F	M	3-4'	summer
Coreopsis	*tinctoria*	golden tickseed	F-P	M	1-2'	spring
Coreopsis	*verticillata*	threadleaf coreopsis	S	D	1-2'	summer
Cornus	*alternifolia*	pagoda dogwood	P-S	W-D	15-25'	summer
Cornus	*amomum*	silky dogwood	F-S	M-W	6-10'	summer
Cornus	*florida*	flowering dogwood	F-S	D-M	25-30'	spring
Cornus	*foemina*	stiff dogwood	P	M-W	20'	spring
Cotinus	*obovatus*	American smoke tree	F	D	15-30'	spring
Corylus	*americana*	American hazelnut	F-S	M	12-15'	spring
Crataegus	*aestivalis*	May hawthorn	P	W	30-40'	spring
Crataegus	*marshallii*	parsley hawthorn	P	D	12-25'	spring
Crataegus	*phaenopyrum*	Washington hawthorn	F-P	M	25-30'	spring

Flower Color	Fall Color	WIS AGCP	WIS EMP	Comments
pink/purple	N	OBL	OBL	attracts butterflies
white	Y	NL	NL	Clusters of fragrant/wht pea-type flowers (spr); yllw. fall color
white to pink	N	FACU	FAC	tuber, good in patches
white, pink, blue, purple	N	FACW	FACW	Usually blooms mid spring and again in fall; attracts birds and butterflies
white	Y	NL	NL	Twisted racines of white lily-of-the-valley like fragrant flowers; yellow orange fall color
white to pink	Y	FACW	FAC	yellow orange fall color
white to pink	N	OBL	OBL	A thicket forming shrub with white to pink flower clusters; fragrant flowers; evergreen
red	N	NL	NL	A shrub with wiry stems and showy red flowers.
blue	N	FACU	FAC	attracts birds, will usually lay down if not supported by other plants
blue-violet	N	FAC	FAC	very vigorous, can be leggy, attracts birds, bees, and butterflies
yellow	N	NL	NL	Rich yellow flower head spring to frost if dead-headed
yellow	N	NL	NL	Annual; self sows
yellow	N	UPL	FACU	Best in full sun, will take part shade; attarcts butterflies
pink	N	OBL	NL	Notched ray flowers surround a center of small, yellow disk flowers.
yellow	N	FAC	FACU	Bright golden yellow flowers all summer; perennial
yellow/maroon	N	FAC	FAC	Nectar source for bees and butterflies; birds eat seeds; considered an annual, but may perfrom as a short lived perennial in some states.
yellow	N	NL	NL	Perennial; spreads by rhizomes; seeds attract birds
white	Y	FAC	FAC	Clusters of wht. flowers (late sum.); Black berries, dull maroon fall follage
white	N	FACW	FACW	Creamy white flowers May-Jun; no fall color
white	Y	FACU	FACU	White flowers in spring turn into bird-attracting berries; red fall color
white	N	FACW	FACW	Reddish twigs becoing gray with age.
red, purple	Y	NL	NL	A short trunk, open crown with flower panicles that develop long, red or purple, hairlike petioles
white, green	Y	FACU	FACU	Edible nuts; suckering; fall color varies from deep red to bright yellow
white	N	OBL	NL	Clusters of white flowers followed by edible red fruit.
white	Y	FAC	FAC	Dainty, white, five-petaled blossoms are followed by bright-red, persistent fruits.
white	Y	FAC	FAC	Wht. spring flowers; red fall berries; orange/ scarlet fall color

Genus	specific epithet	Common Name	Sun	Moisture	Height	Bloom Season
Crataegus	*spathulata*	little-hip hawthorn	P	M	12-36'	spring
Crinum	*americanum*	swamp lily	P	W	2-3'	summer/fall
Croton	*alabamensis*	Alabama croton	P	M	6-8'	spring
Cypripedium	*acuale*	pink lady slipper	P-S	M-D	12"	spring to summer
Cypripedium	*calceolus*	yellow lady slipper	F-P	M	6 - 12"	spring
Cyrilla	*racemiflora*	swamp titi	S	W	10-15'	spring to summer
Decumaria	*barbara*	wild hydrangea-vine	P-S	W	vine	spring to fall
Delphinium	*carolinianum*	blue larkspur	P	D	1-2'	spring to summer
Delphinium	*tricorne*	dwarf larkspur	P	M	12-30"	spring
Dennstaedtia	*punctilobula*	hay-scented fern	P-S	M	36"	N/A
Dicentra	*cucullaria*	dutchman's breeches	F-S	M	10"	spring
Diervilla	*sessilifolia*	bush-honeysuckle	F-S	M	4-6'	summer
Diodia	*virginiana*	Virginia buttonweed	P	D	6-18"	summer
Diospyros	*virginiana*	persimmon	F-P	D-M	30-50'	spring
Dodecatheon	*meadia*	shooting star	F-P	M	1-2'	spring
Dracopis	*amplexicaulis*	clasping coneflower	P	M	2-3'	spring to summer
Drosera	*rotundifolia*	roundleaf sundew	F	W	<12"	summer
Dryopteris	*marginalis*	marginal fern	P-S	W-M	1-3'	N/A
Echinacea	*purpurea*	purple coneflower	F-P	M-D	3'	summer
Elymus	*hystrix*	Eastern bottlebrush grass	F-P	M-D	2.5-5'	summer
Eragrostis	*spectabilis*	purple love grass	F	M	1 - 1.5'	summer/fall
Erythronium	*americanum*	trout lily	P-S	M	8"	spring
Euonymus	*americanus*	Hearts-a-bustin	P-S	M	4-6'	spring
Euonymus	*atropurpureus*	burning bush	P	M	20-25'	spring

Flower Color	Fall Color	WIS AGCP	WIS EMP	Comments
white	N	FAC	FAC	Slender thorny branches with clusters of white flowers.
white	N	OBL	NL	The fragrant flowers are white, sometimes marked with pink on an erect plant that grows in small clumps.
white, yellow	Y	NL	NL	Orange fall color, crushed leaves smell like banana-apple; likes soil rich in organic matter
pink	N	FACU	FACU	One of the largest native Orchids and is found both in low, sandy woods and in higher, rocky woods of mountains.
yellow	N			Found in boggy areas, not available in the trade
white	Y	FACW	FACW	Starts out as a shrub, but eventually grows into a tree; can grow to be up to 30' tall; red fall color; can be evergreen in mild climates
white	N	FACW	OBL	Blooms on new wood and will only bloom when climbing
violet	N	NL	NL	White to pale blue, spurred flowers in a narrow cluster on a finely downy stalk.
deep blue	N	NL	NL	Attracts large numbers of native bees
N/A	N	UPL	FACU	Fronds smell like hay when crushed
white, yellow	N	NL	NL	Can spread to cover larger areas; perennial; attracts bees
yellow	N	NL	NL	Small yellow flowers on tips of new growth all summer
white	N	FACW	FACW	
yellow/green	N	FAC	FAC	Yellow/orange/mauve color; butterfly larval plant; attracts the luna moth
pink & white	N	FACU	FACU	Delicate white to pink petals, red & yellow center; important pollen and nectar source for honeybees
yellow	N	FAC	FAC	Smooth-stemmed annual coneflower
white	N	OBL	OBL	native to swamps and bogs
N/A	N	FACU	FACU	evergreen clumping fern, sensistive to heat, likes an oak leaf winter covering
pink	N	NL	NL	Self sows and spreads by offsets; clumping perennial; attracts butterflies, hummingbirds, and native bees
green	N	UPL	UPL	
purple, red	N	FACU	UPL	Widely available as contaoners or seed, will spread through seed to reseed an area
yellow	N	NL	NL	Large few-petaled yellow flowers; mottled leaves
yellow/green to purplish	Y	FAC	FAC	Purplish flowers in May; interesting red seed pods in Sept, attracts birds; some red fall color
purple	Y	FAC	FACU	Can be a shrub or small tree; red fall color; showy crimson fruit pods in fall and into winter

Genus	specific epithet	Common Name	Sun	Moisture	Height	Bloom Season
Eupatoriadelphus	*fistulosus*	Joe-Pye weed	F-P	M	5-8'	summer
Eutrochium	*fistulosum*	trumpetweed	F-P	M-W	4-7'	summer
Fagus	*grandifolia*	American beech	F-P	M	85+'	spring
Fothergilla	*gardenii*	fothergilla	F-P	W-M	3'	spring
Fothergilla	*major*	large Fothergilla	F-P	M	6-10'	spring
Fragaria	*virginiana*	wild strawberry	F-P	M-D	6"	spring
Frangula	*caroliniana*	Carolina buckthorn	P	M	12-15'	spring
Fraxinus	*americana*	white ash	F	M-D	80'	spring
Fraxinus	*caroliniana*	pop ash	F	M-D	30'	spring
Fraxinus	*pennsylvanica*	green Ash	F	M-D	60-80'	spring
Gaillardia	*pulchella*	firewheel	F-P	D	1-2'	summer
Gaultheria	*procumbens*	wintergreen	P-S	M	4-8"	summer
Gaura	*angustifolia*	southern beeblossom	F-P	M	4'	spring to summer
Gaylussacia	*dumosa*	dwarf huckleberry	P	W-D	3-15"	spring to summer
Gelsemium	*rankinii*	swamp jessamine	F-P	M-D	vine	spring
Gelsemium	*sempervirens*	Carolina jessamine	F-P	M	vine	early spring
Geranium	*maculatum*	wild geranium	F-S	M	1-2'	spring and summer
Gleditsia	*triacanthos*	honey-locust	F	M-D	30-75'	late spring
Gordonia	*lasianthus*	loblolly bay	F	M	30-80'	summer
Gymnocladus	*dioicus*	Kentucky coffeetree	F-P-S	M-D	60-75'	summer
Halesia	*carolina*	Carolina silverbell	F-S	M	30'	spring
Halesia	*diptera*	silver bell	F-P	M	20-30'	spring

Flower Color	Fall Color	WIS AGCP	WIS EMP	Comments
purple	N	FACW	FACW	Purplish-pink flowers explode in Aug/Sept attracting butterflies
pink/purple	N	FACW	FACW	
yellow, green, brown	N	FACU	FACU	Nuts in fall attract birds/mammals/humans; leaves turn copper colored in fall and remain on the tree throughout the winter
white	Y	FACW	FACW	orange to yellow fall color
white	Y	NL	NL	Showy, fragrant flowers in spring; spectacular fall leaves
white	N	FACU	FACU	Forms groundcover; tasty fruit in early summer; fruit attracts wildlife; flowers attract butterflies
yellow	Y	FACU	FAC	Songbirds and other wildlife consume the berries, which apparently have medicinal properties but can be toxic.
green to purple	Y	FACU	FACU	Can grow larger than 80'; early yellow fall color then changing to burgundy; easily transplanted; attracts many butterflies and moths
green	N	OBL	OBL	Small tree; not available in the trade; transplants well
green to purple	Y	FACW	FACW	Yellow fall color; transplants well; planted in spoil soils after strip mining
red and yellow	N	UPL	UPL	Annual, but is a short lived perennial in coastal settings; reseeds; needs well drained soils
pink	N	FACU	FACU	Pink flowers in summer followed by edible fruit that persists; evergreen; deer browse in winter
pink & white	N	NL	NL	Annual; not avaialble in the trade
white	N	FAC	FAC	Spreads by rhizomes; semi-evergreen to deciduous
yellow	N	FACW		This high-climbing vine is very common in parts of the South
yellow	N	FAC	FAC	Evergreen vine; can have problems with leaf miner; seen growing natively in tops of trees all over; fragrant yellow trumpet shaped flowers
purple	N	FACU	FACU	1" lavender-purple clowers in spring & summer; colonizes by rhizomes but is not aggressive
yellow	N	FAC	FAC	A thornless variety is available - Gleditsia triacanthos inermis; attracts butterflies and moths
white	N	FACW	FACW	Evergreen; fragrant white flowers
white, green, brown	Y	NL	NL	Leaves give the foliage a tropical look.
white	N	FACU	FAC	Drooping large white bell-shaped flowers in early spring; yellow to brown fall cplor is considered poor
white	Y	FAC	FAC	The white, tubular flowers hang on long, pendulous pedicels

Genus	specific epithet	Common Name	Sun	Moisture	Height	Bloom Season
Hamamelis	*vernalis*	vernal witch hazel	F-P	M-D	12-36'	winter
Hamamelis	*virginiana*	common witch-hazel	F-S	M	15-30'	fall
Helianthus	*angustifolius*	swamp sunflower	P	M-W	3'	fall
Hepatica	*acutiloba*	sharp-lobed hepatica	S	M-D	4-9"	spring
Heuchera	*americana*	alumroot	S	D	1-3'	spring to summer
Hexastylis	*arifolia*	little brown jugs	P-S	M	6"	spring
Hibiscus	*coccineus*	scarlet-rose mallow	S	W	4-7'	summer
Hibiscus	*moscheutos*	crimson-eyed rose mallow	F-P	M-W	3-8'	summer
Hydrangea	*arborescens*	snowhill hydrangea	P-S	M	4-6'	summer
Hydrangea	*quercifolia*	oakleaf hydrangea	S	M	3-12'	summer
Hymenocallis	*caroliniana*	Carolina spider lily	P-S	M	1-3'	spring, summer
Hypericum	*densiflorum*	dense hypericum	F-P	W-D	4-6'	spring
Hypericum	*prolificum*	shrubby St. John's wort	F-P	M	1-5'	summer
Ilex	*cassine*	dahoon holly	F-P	W-M	20-30'	spring
Ilex	*decidua*	possumhaw	F-P	M	15-30'	spring
Ilex	*glabra*	inkberry	P	M-W	6-12'	spring
Ilex	*montana*	mountain winterberry	F-P	M	15-40'	spring
Ilex	*opaca*	American holly	F-S	M-D	20-40'	spring
Ilex	*verticillata*	common winterberry	F-S	M-W	6-15'	spring
Ilex	*vomitoria*	yaupon	F-P	W-D	12-25'	spring
Illicium	*floridanum*	Florida anise tree	P-S	W-M	6-12'	spring
Impatiens	*capensis*	jewelweed	F-P	M	3'	summer
Ipomopsis	*rubra*	standing-cypress	F-P	D	2-6'	summer
Iris	*cristata*	dwarf crested iris	P-S	M-D	4-8"	spring
Iris	*fulva*	red flag	F-P	M	1-3'	spring

Flower Color	Fall Color	WIS AGCP	WIS EMP	Comments
yellow	Y	FACU	FACU	A small tree or large shrub to 15 ft. tall with multiple, crooked stems forming an irregular, open crown.
yellow	Y	FACU	FACU	1" fragrant, creamy to bright yellow flowers in fall; yellow fall color
yellow	N	FACW	FACW	browsed by white tail deer; seeds used by birds; reseeds readily
white, pink, purple, blue	N	NL	NL	White, pink, blue, or purple solitary flowers in spring
greenish-purple	Y	FACU	FACU	Greenish-purple bell-shaped flowers bloom on leafless stalks; foliage turns purple, red, and yellow in fall
purple to brown	N	FAC	FAC	Spotty groundcover, heart-shaped leaves, jug-shaped flowers held at ground level beneath the leaves
red	N	OBL	OBL	Deep scarlet flowers over 10 inches in width.
white/red	N	OBL	OBL	Widely available, likes slightly acidic soils
white	N	UPL	FACU	Large clusters of flat, creamy white flowers Jun-Jul; suckers freely
white, green, purple	Y	NL	NL	The foliage, shaped something like that of red oak, becomes colorful in fall.
white	N	OBL	OBL	A smooth, fleshy, fragrant perennial
yellow	N	FACW	FACW	Golden yellow 1" flowers in late spring: semi-evergreen; spreads by stolons
yellow	Y	FAC	FACU	Showy 1" yellow flowers bloom Jun-Sept; yellow green fall color
white	N	FACW	FACW	Inconspicuous greenish white axillary flowers.
white	N	FACW	FACW	Female trees produce red berries in fall
white	N	FACW	FAC	Black berries in the fall that persist into winter
white	N	NL	FACU	Red berries on female plants
white	N	FAC	FACU	To ensure fruit, one male is needed per 2-3 females
white	N	FACW	FACW	Red berries on female plants persist into winter & attract birds
white	N	FAC	FAC	Evergreen; berries produced on female plants
red, purple	N	FACW	FACW	Maroon-purple flowers occur singly and are composed of 20-30 strap-like petals.
orange	N	FACW	FACW	Beautiful orange flowers attract butterflies & hummingbirds; annual; important for honey bees
red	N	NL	NL	Showy red tubular flowers on spikes; attracts hummingbirds
lavender-blue	N	NL	NL	Pale lavender-blue, crested flowers Apr-May
red, orange, yellow	N	OBL	OBL	Showy copper, red or orange, drooping petals and spreading sepals make up the terminal flower

Genus	specific epithet	Common Name	Sun	Moisture	Height	Bloom Season
Iris	*virginica*	Southern blue flag iris	P-S	W	3-6'	early summer
Itea	*virginica*	Virginia sweetspire	F-S	W	3-6'	summer
Juglans	*nigra*	black walnut	F-P	M	50-75'	spring
Juncus	*effusus*	common rush	F-P	M-W	3'	spring
Juniperus	*virginiana*	Eastern red cedar	F-P	M-D	40-50'	spring
Justica	*americana*	water willow	F-P	W-M	1-3'	spring/summer
Kalmia	*latifolia*	mountain laurel	P	M	8-10'	spring
Leucothoe	*axillaris*	doghobble	P-S	M	2-4'	spring
Leucothoe	*fontanesiana*	drooping leucothoe	P-S	M	3-5'	summer
Liatris	*spicata*	blazing star	F	M	3'	summer
Lilium	*canadense*	yellow bell lily	F	W-M	3-8'	summer
Lilium	*superbum*	Turks-cap lily	F-P	M	4-6'	summer
Lindera	*benzoin*	spicebush	P-S	M	6-12'	winter
Liquidambar	*styraciflua*	sweetgum	P	M	70-120'	spring
Liriodendron	*tulipifera*	tulip tree	F	M	70-90'	spring
Lobelia	*cardinalis*	cardinal flower	F-P	W	3-5'	fall
Lobelia	*puberula*	lobelia	F-S	M	2-4'	summer/fall
Lobelia	*siphilitica*	greatlobelia	P-S	W	1-3'	summer
Lonicera	*sempervirens*	trumpet honeysuckle	F-P	M	vine	spring
Lyonia	*ligustrina*	male-berry	P	W	6-12'	summer
Lyonia	*lucida*	lyonia	P-S	M-D	3-5'	spring
Lysimachia	*ciliata*	fringed loosterife	F-P	M-W	2-3'	summer
Magnolia	*acuminata*	cucumber tree	P-S	M	50-75'	spring

Flower Color	Fall Color	WIS AGCP	WIS EMP	Comments
blue/purple	N	OBL	OBL	Spreads by rhizomes; be sure to get this iris and not the nonnative invasive yellow flag iris
white	Y	FACW	OBL	Spectacular long lasting yellow, orange, crimson fall color
yellow, green, brown	Y	UPL	FACU	Yellow fall color; deep tap root makes transplant difficult; certain plants will not grow beneath b;lack walnut due to the juglones it releases into the soil; attracts birds and small mammals; host plant for luna moth
yellow	N	OBL	FACW	Attracts birds, very easily transplanted, can be divided
green, purple, brown	N	FACU	FACU	Offers nesting and cover to birds; fruits used extensively by birds and small mammals; evergreen
pink, purple, violet	N	OBL	OBL	An aquatic with bicolored flowers in dense, head-like or spike-like clusters.
pink, red, white	N	FACU	FACU	Pink, red, or white flowers in late spring; evergreen; difficult to propagate
white to pink	N	FACW	FACW	Evergreen; attracts bees; browsed by deer
white	N	FACW	FACW	Lance-shaped leaves on slender stems; few branches; evergreen
purple	N	FAC	FAC	Tall purple spikes bloom after 2-3 years; attracts butterflies and hummingbirds
red, orange, yellow	N	FAC	FAC	A large, showy lily with recurved petals
orange	N	FACW	FACW	Gorgeous orange flowers; morning sun & afternoon shade
yellow	N	FACW	FAC	Yellow spicily fragrant flowers in late winter; red fruit in fall on female plants
white, green	Y	FAC	FAC	Red to purple fall color; fruit attracts several bird species; used as a nesting site
yellow, green, orange	Y	FACU	FACU	Large tulip-like flowers are yellow/grn./org. in May-June; yellow fall color
red	N	FACW	FACW	Terminal clusters of bright red flowers each 1 1/2" long in fall
blue-violet	N	FACW	FACW	Spikes of flowers range from pale blue to violet
blue	N	OBL	FACW	Elongated clusters of pale to dark blue flowers in late summer
red to orange	N	FACU	FACU	Evergreen vine; flowers followed by red berries that attract birds and other wildlife; flowers attract hummingbirds, butterflies, and bees
white	Y	FACW	FACW	Orange to red fall color; low wildlife value; does attract birds
pink	N	FACW	FACW	Evergreen; suckers easily; flowers attract bees
yellow	N	FACW	FACW	Yellow flowers grow upside-down; good groundcover; tolerates seasonal flooding
yellow/green	N	NL	FACU	Yellow/grn. magnolia-type flowers (spr); pink/red fuit in fall; fruits eaten by ground foraging birds and small mammals

Genus	specific epithet	Common Name	Sun	Moisture	Height	Bloom Season
Magnolia	*grandiflora*	Southern magnolia	F-P	M-D	72-100'	spring
Magnolia	*macrophylla*	bigleaf magnolia	P	W	30-40'	summer
Magnolia	*tripetela*	umbrella tree	F-P	M	15-40'	spring
Magnolia	*virginiana*	sweetbay magnolia	PS	M-D	40-60'	summer
Maianthemum	*canadense*	wild lily of the valley	P-S	M	3-6"	late spring to early summer
Malus	*angustifolia*	southern crabapple	P	M	25-30'	spring
Matteuccia	*struthiopteris*	osterich fern	P	M	3-6'	N/A
Mertensia	*virginica*	Virginia bluebells	F-P	M	1-3'	spring
Mitchella	*repens*	partridge berry	P-S	M	3"	spring to summer
Mitella	*diphylla*	bishop's cap	P-S	M-D	1-2'	spring
Monarda	*didyma*	bee balm	F-P	M	3-4'	summer
Morella	*cerifera*	southern wax myrtle	F-P	M-D	6-12'	spring
Morus	*rubra*	red mulberry	F-P-S	M-D	12-36'	spring
Muhlenbergia	*capillaris*	muhly grass	F-P	M-D	3'	fall
Nelumbo	*lutea*	American lotus	F	W	6'	summer
Nuphar	*lutea*	cow lily	P	W	3'	spring to fall
Nymphaea	*odorata*	American water lily	F-P-S	W	1'	spring to fall
Nyssa	*aquatica*	water tupelo	F	W	50-100'	sping
Nyssa	*sylvatica*	black tupelo	F	M-D	30-60'	spring
Oenothera	*speciosa*	pink evening-primrose	FS	M	1-3'	spring
Onoclea	*sensibilis*	sensitive fern	F-P	W	12-24"	N/A
Osmanthus	*americanus*	devilwood	P	M	30'	spring
Osmunda	*cinnamomea*	cinnamon fern	P-S	M-W	24-48"	N/A
Osmunda	*regalis*	royal fern	P	M-W	2-5'	N/A
Ostrya	*virginiana*	hop-hornbeam	P-S	M	30-50'	spring
Oxydendrum	*arboreum*	sourwood	F-S	M-D	20-30'	summer
Pachysandra	*procumbens*	Allegheny spurge	P-S	M	9"	spring

Flower Color	Fall Color	WIS AGCP	WIS EMP	Comments
white	N	FAC	FACU	Beautiful fragrant large white flowers.
white	N	NL	NL	Largest flowers and largest leaves of all native North American species.
white	N	FACU	FACU	6-8" wht. flowers spring w/unpleasant odor; red fruit in fall
white	N	FACW	FACW	Semi-evergreen to evergreen; lemon scented flowers; attracts sweetbay silk moth; medium growth rate
white	N	FAC	FAC	Spreads by rhizomes to form a colony.
pink	N	NL	NL	Fruit consumed by birds and small mammals
N/A	N	FACW	FACW	2-8 foot tall fronds.
purple	N	FAC	FACW	Nodding clusters of pink buds that open into light blue trumpet-shaped flowers.
pink	N	FACU	FACU	Elegant pink flowers, red edible fruit,dense/ creeping evergreen groundcover
white	N	FACU	FACU	Produces distinctive clusters of tiny white flowers
red	N	FAC	FAC	Edible leaves; red flowers attract bees/ hummingbirds
green	N	FAC	FAC	Fixes nitrogen; should not be used in nitrogen sensitive watersheds; evergreen, attracts birds and butterflies
white, green, brown	Y	FACU	FACU	Habitat, flower and fruit similar to white mulberry; yellow fall color
pink	N	FAC	FACU	Used extensively, a good phosphorous uptake plant
yellow	N	OBL	OBL	Aquatic plant, good for deep pools
yellow	N	OBL	OBL	Aquatic plant, can grow in water up to 16" deep
white/yellow	N	OBL	OBL	Aquatic plant, shallow water
green	N	OBL	OBL	Buttressed base, flood tolerant, deciduous, can grow in standing water
white, green, brown	Y	FAC	FAC	Scarlet-red fall color
pink, white	N	NL	NL	Opens flowers in the evening, closing them by early morning; seeds attract birds and mammals
N/A	N	FACW	FACW	Shelters salamanders and frogs; poisonous to livestock; roots shallow
white	N	NL	NL	Small fragrant white flowers; evergreen
N/A	N	FACW	FACW	Clusters of arching fronds; cinnamon colored fertile fronds
N/A	N	OBL	OBL	Tolerates year round shallow water; pinnae resemble locust tree leaves
white, yellow, green, brown	Y	FACU	FACU	Scarlet red autumn color; some food value to birds and small mammals
white	Y	FACU	UPL	Fragrant flowers in spring; yellow/pink/red in fall
white, pink	N	NL	NL	Mottled purple leaves; flowers are white with pink tinge; semi-evergreen groundcover; spreads by slender rhizomes

Genus	specific epithet	Common Name	Sun	Moisture	Height	Bloom Season
Panicum	*virgatum*	switchgrass	F-P	M-D	3-6'	summer/fall
Parthenocissus	*quinqefolia*	Virginia creeper	F-P-S	W-M-D	vine	spring
Passiflora	*incarnata*	passion flower	S-P	M-D	12-36'	spring to fall
Peltandra	*virginica*	arrow arum	P	W	2-3'	spring
Penstemon	*digitalis*	Foxglove Beardtongue	F-P-S	D	3-6'	summer
Persea	*borbonia*	red bay	P	W-M	36-72'	spring
Phacelia	*bipinnatifida*	fernleaf phacelia	P-S	M	1-2'	spring
Philadelphus	*inodorus*	mock orange	F-P	W	10-12'	spring
Phlox	*amoena*	chalice phlox	F-P	M	2-3'	spring
Phlox	*carolina*	Carolina phlox	F-P	M	3-4'	summer to fall
Phlox	*divaricata*	wild blue phlox	P-S	M	12-18"	spring
Phlox	*glaberrima*	smooth phlox	P	W-M	2-4'	spring
Phlox	*paniculata*	garden phlox	F-P	M	2-4'	summer
Phlox	*stolonifera*	creeping phlox	P-S	M	6-10"	spring
Photinia	*melanocarpa*	black chokeberry	F-P	D-W	3-5'	spring
Physostegia	*virginiana*	obedient plant	F-P	W-D	4'	summer to fall
Pinus	*echinata*	short-leaf pine	P	D	50-100'	spring
Pinus	*elliottii*	slash pine	P	M	75-100'	winter
Pinus	*glabra*	spruce pine	P	M	100-120'	spring
Pinus	*palustrus*	long-leaf pine	F	D	80-100'	winter
Pinus	*strobus*	Eastern white pine	F-P-S	M-D	75-100'	spring
Pinus	*taeda*	loblolly pine	P	D	60-110'	spring
Pinus	*virginiana*	Virginia pine	F-P	M-D	15-40'	spring

Flower Color	Fall Color	WIS AGCP	WIS EMP	Comments
green and brown	N	FAC	FAC	Grows in clumps; a loose sod former; spreads by rhizomes; attracts birds and butterflies
white/green	N	FACU	FACU	A woody, dedicuous vine, Virginia Creeper can be high-climbing or trailing.
purple, pink, white	N	NL	NL	Unusual purple showy flowers; vine with tendrils
yellow	N	OBL	OBL	Flowers are spathe and spadix
white	N	FAC	FAC	
pale yellow	N	FACW	FACW	Evergreen with pale yellow flowers; aromatic; fruit eaten by birds
purple, violet, blue	N	NL	NL	Reseeds readily; contact can cause allergic reaction; biennial - blooms mid-spring of second year
white	N	NL	NL	Attracts large numbers of native bees; white flowers are nearly odorless - Philadelphus coronarious (nonnative) has fragrant flowers
pink	N	NL	NL	Clusters of fragrant rose and white flowers, attracts hummingbirds
white, pink, purple	N	FACU	FACU	Thick leaves & showy flower clusters; attracts butterflies and hummingbirds
lavender	N	FACU	FACU	Fragrant lavender-blue flowers Apr-May
pink/purple	N	FACW	FAC	Attracts hummingbirds
pink, magenta, white	N	FACU	FACU	Clusters of magenta, pink lavender, or white flowers Jul-Sep; powdery mildew can be a problem
white, pink, purple, violet	N	NL	NL	White, pink, purple to violet trumpet-shaped flowers in spring; semi-evergreen groundcover; does not like full sun; slugs can be a problem in wet soils
white	Y	FAC	FAC	Dependable showy orange, burgundy & purple fall color
pink, purple	N	FACW	FAC	Long lasting purple flowers with triangular lobes; can be aggressive; colonizes
yellow	N	NL	NL	Evergreen; used for cover and nesting site; seeds attract birds; attracts butterflies
red	N	FACW	FACW	Evergreen; loses its lower branches with age, forming a open, rounded crown.
green	N	FACW	FACW	Evergreen; spruce pine has bark that resembles a spruce tree.
brown	N	FAC	FAC	Evergreen; an 80-100 ft. tree with short, stout, spare branches forming an open, irregular crown.
green	N	FACU	FACU	Evergreen;largest Northeastern conifer and useful for pulpwood, construction, and countless other items.
yellow	N	FAC	FAC	Evergreen; used for cover and nesting site; seeds attract birds; attracts butterflies
yellow	N	NL	NL	Evergreen; seeds attract birds; attracts butterflies

Genus	specific epithet	Common Name	Sun	Moisture	Height	Bloom Season
Platanus	*occidentalis*	sycamore	F-P	M-W	70-90'	spring
Podophyllum	*peltatum*	may apple	P-S	M	1.5'	spring
Polemonium	*reptans*	Jacob's ladder	S	M	1-3'	spring
Polygonatum	*biflorum*	Solomon's seal	P-S	M	2-3'	spring
Polystichum	*acrostichoides*	Christmas fern	P-S	M	12-36"	N/A
Pontederia	*cordata*	pickerel weed	W	M-W	3'	summer
Prunus	*americana*	American plum	F-P	W-D	12-20'	spring
Prunus	*angustifolia*	chickasaw plum	P	D	15-30'	spring
Prunus	*caroliniana*	Carolina laurelcherry	F-P	M	15-36'	spring
Prunus	*serotina*	black cherry	F-S	D	50-80'	spring
Ptelea	*trifoliata*	hoptree	F-S	M	15-20'	spring
Physocarpus	*opulifolius*	ninebark	F-P-S	D-M-W	6-12'	summer
Quercus	*alba*	white oak	F-P	D	60-90'	spring
Quercus	*bicolor*	swamp white oak	P	W-M	80'	spring
Quercus	*coccinea*	scarlet oak	F	M	60-75'	spring
Quercus	*falcata*	Southern red oak	P	D	100'	spring
Quercus	*georgiana*	Georgia oak	S	D	12-36'	spring
Quercus	*hemisphaerica*	darlington oak	F	D	90-120'	spring
Quercus	*laevis*	turkey oak	F	M-D	30-40'	spring
Quercus	*laurifolia*	laurel oak	P	M	36-80'	spring
Quercus	*lyrata*	overcup oak	F-P	W-M-D	30-45'	spring
Quercus	*michauxii*	swamp chestnut oak	P	M	50-100'	spring
Quercus	*nigra*	water oak	P	W-M	50-100'	spring
Quercus	*phellos*	willow oak	P	W-M	100'	spring
Quercus	*prinus*	chestnut oak	P	D	65-145'	spring
Quercus	*rubra*	red oak	F-P	M-D	60-75'	spring

Flower Color	Fall Color	WIS AGCP	WIS EMP	Comments
yellow, green, brown	N	FACW	FACW	leaves drop all summer; white molted bark; attracts birds; shade tree
white, pink	N	FACU	FACU	Only has two leaves and one flower; leaves, roots, and stems toxic if ingested; colonizes by rhizomes
purple	N	FAC	FACU	A smooth, weak-stemmed plant with light blue to purple, bell-shaped flowers.
greenish white	N	FACU	FACU	1/2" bell-shaped greenish-white flowers hang from leaf axils; attracts birds and butterflies
N/A	N	FACU	FACU	Stiff deep green fronds are once-pinnate
blue/purple	N	OBL	OBL	Easy to grow so long as it does not dry out; attracts bees and butterflies, also attracts dragonflies that eat mosquitp larvae.
white	Y	UPL	FACU	White fragrant flowers in spring; 1" red/yellow fruit in summer; red to yellow fall color
white	Y	NL	NL	Pale yellow fall color; edible fruit; attracts birds and butterflies
white	N	FACU	FACU	Evergreen; attracts native bees; berries attract birds
white	Y	FACU	FACU	Messy tree; small edible berries in summmer attract birds; yellow fall color
white	Y	FACU	FAC	Small, white fragrant flowers; yellow/green fall color; larval host for swallowtails
white/pink	Y	FAC	FACW	Has been used as a live stake, yellow fall color
red, yellow, green, brown	Y	FACU	FACU	Brown/red/ bright red fall color; grows rapidly; attracts birds and butterflies
red, yellow, green	Y	FACW	FACW	Attracts birds and small mammals; yellow fall color
yellow	Y	NL	NL	A beautiful oak best known for its brilliant autumn color.
yellow	Y	FACU	FACU	Reddish brown fall color; used for cover and as a nesting site; attracts birds and moths
green	Y	NL	NL	This species is a conservation concern and is officially listed as threatened.
green	N	FACU	FACU	A short-lived pyramidal-rounded evergreen.
yellow	Y	NL	NL	Leaves resemble a turkey foot; brightly colored Fall foliage.
yellow	N	FACW	FACW	Semi-evergreen; can be short lived
yellow	N	OBL	OBL	Attracts waterfowl
yellow	Y	FACW	FACW	Yellow to red fall color; attracts birds and butterflies
yellow	Y	FAC	FAC	Yellow fall color; attracts moths, birds, and small mammals
yellow	Y	FACW	FAC	Attracts moths and birds; yellow or russet fall color
yellow	Y	UPL	UPL	A medium to large tree with chestnut-like foliage.
yellow, green, brown	Y	FACU	FACU	Russett red to bright red fall color; grows rapidly; attracts birds and small mammals

Genus	specific epithet	Common Name	Sun	Moisture	Height	Bloom Season
Quercus	*shumardi*	shumard oak	F-P	M-D	50-90'	spring
Quercus	*stellata*	post oak	F-P	D	40-50'	spring
Quercus	*virginiana*	live oak	F-P	M-D	40-80'	spring
Rhapidophyllum	*hystrix*	blue palmetto	F-P	W-M	3-6'	spring/summer
Rhododendron	*alabamense*	Alabama azalea	S	M	5-6'	spring
Rhododendron	*arborescens*	smooth azalea	P	M	8-12'	summer
Rhododendron	*austrinum*	Florida flame azalea	P	D	6-12'	spring
Rhododendron	*calendulaceum*	flame azalea	P-S	M	4-8'	spring
Rhododendron	*canescens*	piedmont azalea	P	D	6-12'	spring
Rhododendron	*catawbiense*	mountain rosebay	F-S	M	6-10'	spring
Rhododendron	*periclymenoides*	pinxter azalea	P-S	M	6-10'	spring
Rhododendron	*maximum*	rosebay rhododendron	P-S	M-W	15-40'	summer
Rhododendron	*viscosum*	swamp azalea	P	D	12'	summer
Rhus	*copallinum*	winged sumac	F	D	20-35'	summer
Rhus	*glabra*	smooth sumac	F-P	M-D	9-15'	summer
Robinia	*pseudoacacia*	honey-locust	F	M-D	30-50'	spring
Rosa	*carolina*	Carolina rose	F-P	W-D	3-4'	summer
Rosa	*palustris*	swamp rose	F-P	M-W	4-6'	summer
Rudbeckia	*fulgida*	orange coneflower	F-P	M	3'	summer to fall
Rudbeckia	*hirta*	black-eyed susan	F-P	M-D	2-3'	summer/fall
Ruellia	*caroliniensis*	Carolina wild petunia	P	M	2-3'	summer
Ruellia	*humilis*	fringe leaf wild petunia	F-P	D	1-2'	summer

Flower Color	Fall Color	WIS AGCP	WIS EMP	Comments
white/green	Y	FAC	FAC	Scarlet red fall color; used for cover and as a nesting site; fruits attract birds
yellow, brown	Y	UPL	UPL	Variable fall color; non-showy to golden-brown
yellow	N	FACU	FACU	Evergreen; frequently seen growing with spanish moss in the South; birds and squirrels use this tree for cover
white	N	FACW	FACW	Needle palm is an armed shrub, rarely more than 6 ft. tall, with erect or spreading stems from a short trunk.
white/yellow	N	NL	NL	Decidiuous, flowers before leaves emerge, flowers lemon scented
white	Y	FACW	FAC	Large white flowers, it is the last of the azaleas to bloom in the spring.
orange/yellow/ red	N	FAC	FAC	Beautiful orange, yellow, and red flowers.
yellow, orange, scarlet	N	NL	NL	Yellow, orange, scarlet flowers in late spring
white/pink	N	FACW	FACW	A showy shrub growing up to 8 feet tall.
lilac-purple	N	FACU	FACU	5-6" umbel of lilac-purple to pale pink flowers mid-spring; special value to honey bees; evergreen
pink	N	FAC	FAC	Variable flower color - often pink flowers before leaves emerge; special value to honey bees
white to deep pink	N	FAC	FAC	Huge clusters of white to deep pink flowers with yellow spots; evergreen; should not be ingested by humand or animals
white to pink	N	OBL	FACW	Special value to honey bees
yellow, green	Y	UPL	FACU	Yellowish-green flowers are succeeded by drooping, pubescent, pyramidal fruit clusters
white, green, yellow, brown	Y	NL	NL	Velvety red fruit on female plants that persist into winter; special value to native bees; also attracts parasitic insects that prey on insect pests
white	N	UPL	FACU	Attracts large numbers of native bees and honey bees; attracts butterflies, birds, and hummingbirds
pink	Y	FACU	FACU	Yellow, orange, red fall color; pink flowers May-July; does not have thorns
pink	N	OBL	OBL	Fragrant flowers in summer, red hips in fall; attracts birds
yellow	N	FAC	FAC	Attracts birds; will colonize by offsets and reseeding
yellow	Y	FACU	FACU	2-4" flower heads with 10-20 bright yellow petals summer/fall; annual or short lived perennial; attracts nectar bees and butterflies; attracts birds
purple	N	FACU	FACU	Usually only one or two of the light purple flowers are open per day.
purple	N	FACU	FACU	Its showy flowers are petunia shaped and vary in color from lavender to purple.

Genus	specific epithet	Common Name	Sun	Moisture	Height	Bloom Season
Sabal	*minor*	dwarf palmetto	F-P-S	M-D	5-10'	summer
Sagittaria	*lancifolia*	lance leaf arrowhead	F	W	3'	summer
Sagittaria	*latifolia*	duck-potato	F-P	W	1-3'	summer
Salvia	*coccinea*	Texas sage	F-P	M-D	1-3'	spring/ summer/fall
Salix	*sericea*	silky willow	F-S	W-M	12'	spring
Sambucus	*canadensis*	elderberry	F-S	M-W	5-12'	summer
Sambucus	*nigra*	elderberry	P	W	10-20'	spring to summer
Sanguinaria	*canadensis*	bloodroot	S	M	6-10"	spring
Sassafras	*albidum*	common sassafras	F-P	D-M	30-60'	spring
Saururus	*cernuus*	lizard's tail	P-S	M-W	4'	spring/summer
Schizachrium	*scoparium*	little bluestem	F-P	D	3'	summer to fall
Schoenoplectus	*americanus*	three square	F-P	M	3-6'	spring to summer
Schoenoplectus	*tabernaemontani*	sofstem bulrush	F	W	3-6'	spring
Scirpus	*cyperinus*	woolgrass	F	W	3-6'	summer
Sedum	*pulchellum*	rock stonecrop	F	W	0-1'	spring
Sedum	*ternatum*	wild stonecrop	P	M	4-8"	spring
Serenoa	*repens*	saw palmetto	P	M	10-12'	summer
Sideroxylon	*lycioides*	buckthron bumelia	P	W-M	20'	summer
Silene	*virginica*	fire pink	F-P	M	10-20"	spring/summer
Sisyrinchium	*angustifolium*	narrow blue eyed grass	F-P	W-M	1.5'	spring/summer
Sisyrinchium	*mucronatum*	blue-eyed grass	F-P	M-D	1'	summer
Smilax	*smallii*	jackson vine	F-P	M	8'	spring
Solidago	*altissima*	goldenrod	F-S	M	2-4'	fall
Solidago	*rugosa*	winkle-leaf goldenrod	F	M-D	2-5'	fall
Sorghastrum	*nutans*	indiangrass	F-P-S	M-D	3-8'	summer

Flower Color	Fall Color	WIS AGCP	WIS EMP	Comments
white	N	FACW	FACW	Fruit attracts birds and mammals; used for cover
white	N	OBL	OBL	A tuber that produces rhizomes;
white	N	OBL	OBL	Colonizing; starchy tubers used by ducks and muskrats
red	N	NL	NL	Several whorls of red flowers form an interrupted spike on a square stem.
green, yellow	N	OBL	OBL	Provides good wildlife habitat; used for live stakes
white	N	FACW	FACW	Showy white flowers in July, edible fruit in Sept; commonly used for live stakes
white	N	FACW	FACU	Produces berries that are used in preserves and pies but should never be eaten when fresh and raw.
white	N	UPL	UPL	2" white flowers with yellow centers; roots have red sap; rhizomes toxic and may be fatal if ingested
yellow	Y	FACU	FACU	Yellow flowers (Apr); clear yellow/orange/pink/ scarlet fall color; fruit attracts birds
white	N	OBL	OBL	Prefers up to 4" flooding; colonizing
white	Y	FACU	FACU	clump forming perennial grass with great striking red fall color that remains almost all winter
yellow, brown	N	OBL	OBL	Native to coastal AL but will perform throughout the state; the rhizomes, are a food source of muskrat, nutria, and other animals
red	N	OBL	OBL	Native to central AL
green and brown	N	OBL	FACW	Seeds eaten by waterfowl. Roots eaten by muskrats and geese. Provides cover for nesting birds; colonizing
white/pink	N	UPL	FACU	
white	N	NL	FACU	Rock loving perennial
white	N	FACU	FACU	Small, white, fragrant flowers occur on plume-like branched stalks from leaf axils.
white	N	FAC	FACW	Spiny shrub or small tree with open crown
pink	N	NL	NL	Deep red-pink flowers attract hummingbirds and butterflies; short lived perennial
blue	N	FACW	FACW	Leaves of this perennial form dense, tufted clumps which steadily grow with new foliage during the season.
blue/purple	N	FACW	FAC	Rich blue/purple flowers with yellow centers May-Jul; a member of the Iris family
yellow/green	N	FACU	FACU	Thornless; attracts birds
yellow	N	FACU	FACU	Attracts butterflies and birds
yellow	N	FAC	FAC	Tiny flowers look like strings of yellow beads Aug-Oct
yellow	Y	FACU	FACU	Deep orange to purple fall color; tolerates seasonal inundation

Genus	specific epithet	Common Name	Sun	Moisture	Height	Bloom Season
Sparganium	*americanum*	bur-reed	S-P	W	2.5'	summer
Spigelia	*marilandica*	indian pink	P	D	1-2'	spring
Staphylea	*trifolia*	American bladdernut	S	M	8-15'	spring
Stewartia	*malacodendron*	silky camellia	S	M	10'	spring
Stewartia	*ovata*	mountain camelia	S	M	12-20'	summer
Stokesia	*laevis*	stoke's aster	F	M	12-30"	summer
Stylophorum	*diphyllum*	celadine	S	M	12-14"	spring
Styrax	*americanus*	snowbell	F-P	W-M	8-15'	spring/summer
Styrax	*grandifolius*	bigleaf snowbell	P	M	20'	spring
Symphoricarpus	*orbiculatus*	coral berry	F-S	M	2-5'	spring/summer
Symphyotrichum	*patens*	late purple aster	F-P	M-D	1-3'	summer
Symplocos	*tinctoria*	horsesugar	P	W	36-72'	spring
Taxodium	*distichum*	bald cypress	F-P	W	50-75'	spring
Thelypteris	*kunthii*	Kunth's maiden fern	P-S	M	3'	N/A
Thelypteris	*noveboracensis*	New York fern	P-S	M-D	1-2'	N/A
Thermopsis	*villosa*	bush pea	S	M	3-5'	spring/summer
Tiarella	*cordifolia*	foamflower	P-S	M	6-12"	spring
Tilia	*americana*	American linden	F-S	M	60-80'	spring/summer
Tradescantia	*virginiana*	Virginia spiderwort	F-P-S	D-M	3'	spring/summer
Trillium	*grandiflorum*	white trillium	P-S	M	8-16"	spring/summer
Tsuga	*canadensis*	Canadian hemlock	F-S	M	40-60'	spring
Ulmus	*alata*	winged elm	PS	D	30-40'	spring

Flower Color	Fall Color	WIS AGCP	WIS EMP	Comments
yellow/green	N	OBL	OBL	Seeds used by waterfowl; tolerates flowing water; colonizes by slender underground rhizomes
red/yellow	N	NL	NL	Blooms from the bottom upward and the flowering season can be prolonged by removing the flowers as they wither.
white	N	FAC	FAC	Drooping clusters of cream, bell-shaped flowers and attractive, dark-green, trifoliate leaves.
white	N	NL	NL	Open branched deciduous shrub
white	Y	NL	NL	Large, showy, solitary, white flower with crimped and scalloped edges.
purple	N	FAC	FAC	Showy purple flowers
yellow	N	NL	NL	Known for its large, poppy-like, yellow flowers.
white	N	FACW	OBL	Attracts nectar bees and butterflies; fruit attracts birds
white	N	FACU	FACU	Fragrant white flowers are bell-shaped and hang from the tree in late spring. It needs shade and acid, moist soil.
white/green	N	FACU	FACU	Bell shaped flowers become clusters of large pink berries
violet-blue	N	NL	NL	1 1/2" bright violet-blue flowers with yellow centers, used to be Aster patens
cream/white	N	FAC	FAC	Small, fragrant cream colored flowers.
purple	Y	OBL	OBL	Leaves turn yellow to copper in fall; attracts birds and small mammals; used for cover and nesting site
N/A	Y	FACW	FACW	Arching fronds of this fern are lime to medium-green in color; bronze fall color
N/A	N	NL	NL	Provides shelter for toads
yellow	N	NL	NL	1" yellow flowers crowd long narrow erect clusters spring/sum; needs water during droughty summers
white	N	FAC	FAC	Evergreen groundcover; feathery white flowers Apr-Jun; spreads by underground stems
yellow	N	FACU	FACU	Clusters of creamy yellow fragrant flowers; flowers attract native bees and honey bees; this tree attracts predatory insects that prey on insect pests and supports biological control efforts
blue, purple	N	FAC	FACU	Adaptable to various soil conditions; Juglones tolerant
white	N	NL	NL	A single large, white, long-lasting flower arises above the leaf whorl
yellow	N	FACU	FACU	When grown in sun this evergreen requires consistent watering; attracts showy insects such as butterflies and moths
yellow/green	Y	FACU	FACU	Dull yellow fall color; fast growing shade tree used for cover and as a nesting site; attracts birds, butterflies, and small mammals

Genus	specific epithet	Common Name	Sun	Moisture	Height	Bloom Season
Ulmus	*americana*	American elm	F-P	M	80'	spring
Vaccinium	*arboreum*	farkleberry	PS	D	12-15'	spring/summer
Vaccinium	*corymbosum*	highbush blueberry	F-P	W-D	6-12'	spring/summer
Vaccinium	*darrowii*	evergreen blueberry	P	M	1-3'	spring
Vaccinium	*elliottii*	elliot's huckleberry	F-P	W-M	12'	spring
Vaccinium	*pallidum*	lowbush blueberry	F-P	M-D	12-16"	spring
Vaccinium	*stamineum*	deerberry	F-P	M	10-15'	spring/summer
Vallisneria	*americana*	eelgrass	F-P	W	6-12"	spring to summer
Verbena	*hastata*	swamp verbena	F-P	M	3-5'	summer
Vernonia	*gigantea*	giant ironweed	F-S	M	5-8'	fall
Vernonia	*noveboracensis*	New York ironweed	F	M-W	4-7'	summer
Viburnum	*acerifolium*	maple-leaf viburnum	F-P	M-D	4-6'	spring/summer
Viburnum	*dentatum*	arrowwood	F-P	W-M	6-12'	spring
Viburnum	*nudum*	possumhaw	F-S	W-M	6-8'	summer
Virburnum	*obovatum*	small-leaf arrow wood	P	M	12-18'	spring
Viburnum	*prunifolium*	smooth blackhaw	P	M	12-15'	spring
Viburnum	*rufidulum*	blackhaw viburnum	F-S	D-M	10-15'	spring
Viola	*egglestonii*	glade violet	P-S	D-M	6"	spring
Viola	*papilionacea*	common blue violet	PS	W	4"	spring
Viola	*pedata*	bird-foot violet	F-S	D	4-10"	spring to summer
Viola	*sororia*	blue violet	S-P	M	6-10"	spring
Vitis	*rotundifolia*	muscadine	F-P	M	90'	summer

Flower Color	Fall Color	WIS AGCP	WIS EMP	Comments
red, green	N	FAC	FACW	Was once a common tree, but has been largely eradicated due to Dutch Elm disease
white	Y	FACU	FACU	Red fall color; fruit attracts birds and mammals
white to pink	Y	FACW	FACW	Excellent fall colo that is red, orange, yellow, and sometimes purple; fruit readily eaten by humans & wildlife
pink to white	N	FACU	NL	Small, blue-green leaves with a whitish bloom and pink to white, urn-shaped flowers.
pink	N	FACW	FACW	Flowers appread before the leaves and are bell-shaped; blue black fruit; best in full sun
white/pink	N	NL	NL	Sets some fruit even in shade; has white/pink flowers; fruit attracts birds
white	N	FACU	FACU	Twisted trunks; bell-shaped flowers; sweet, spicy tasting fruit; birds and mammals eat berries
green	N	OBL	OBL	grow from stoloniferous clumps submerged under water. In shallow water, leaves may reach and float on the surface; important food source for turtles
purple	N	FAC	FACW	Used by native bees; reseeds
purple	N	FAC	FAC	Attracts bees
red, purple	N	FACW	FACW	Intense reddish-purple thistle-like heads; flowers attract butterflies and seeds attract birds
white	Y	FACU	UPL	Pie-shaped clusters of creamy-white flowers; beautiful fall color; attracts birds and butterflies
white	Y	FAC	FAC	Creamy-white blooms in spring; yellow to red fall color; attracts many different birds; butterfluy attractant
white	Y	FACW	OBL	Showy clusters of white flowers in May and June; berries turn pink to blue to black; attracts birds and small mammals
white	N	FACW	FACW	White flowers appear while the leaves develop and are followed by red fruits
white	Y	FACU	FACU	Fruit is consumed by songbirds, gamebirds, and mammals and can be made into preserves.
white	Y	UPL	UPL	Showy clusters of wht. flowers that leap out from foliage; attarcts nectar insects, butterflies, and bees
purple, violet, blue	N	NL	NL	
purple	N	NL	NL	
blue, purple	N	FACU	FACU	Clumping; reproduces by seeds unlike other violets that reproduce vegetatively
white, blue, purple, pink	N	FAC	FAC	Attracts birds; leaves and flowers edible; leaves high in vitamins A and C
yellow	N	FAC	FAC	Flowers in June; bark is not exfoliating; purple, black, or bronze berries ripen in Sept or Oct.

Genus	specific epithet	Common Name	Sun	Moisture	Height	Bloom Season
Wisteria	*frutescens*	American-wisteria	F-S	M	25-30'	spring
Woodwardia	*areolata*	chain fern	P-S	M-W	1-2'	N/A
Xanthorhiza	*simplicissima*	yellow-root	F-S	M	2-3'	spring
Yucca	*aloifolia*	aloe yucca	F	D	6-12'	summer
Yucca	*filamentosa*	Adam's needle yucca	F	M-D	2-3'	spring to summer
Zephyranthes	*atamasca*	atamasca lily	P	W-M	8-15"	spring

Sun Exposure: F=Full Sun, P=Part Sun, S=Shade

Soil Moisture: W=Wet, M=Moderate, D=Dry

Wetland Indicator Stats (WIS): OBL=Ogligate, FAC=Facultative, FACU=Facultative Upland, UPL=Upland

NI=No Indicator, insufficient information available to determine indicator status, NL=Not Listed

Flower Color	Fall Color	WIS AGCP	WIS EMP	Comments
white, pink to purple	N	FACW	FACW	Deciduous vine; flowers appear after plant has leafed out unlike nonnative wisterias; less aggressive compared to nonnatives; attracts butterflies
N/A	N	OBL	FACW	Provides cover for frogs, toads, and newts
purple	N	FACW	FACW	Bright green celery-like folliage; racemes of purple flowers
white	N	UPL	FACU	The evergreen leaves are thick and stiff and up to 2 ft. long, with tiny, sharp serrations
white	N	NL	NL	Flower stalk can be as high as 6'; attracts butterflies and moths
white	N	FACW	FACW	Colony forming; will bloom best with 1 to 2 hours of direct sun or 3 or more hours of dappled light; tolerant of seasonal flooding

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