

# 2023 Wholesale Nursery Catalog



*Baptisia australis*  
blue false indigo



Environmental  
Concern

*Growing  
native plants  
since 1972*

Visit us online at [www.wetland.org](http://www.wetland.org)



# ENVIRONMENTAL CONCERN INC.

## Celebrating over 51 years – and still growing!

Environmental Concern (EC) is proud to offer the highest quality native plants in the Mid-Atlantic region. Since 1972, EC has been propagating native wetland plants from locally collected seed, developing state-of-the-art restoration practices, and educating the public about the importance of wetlands. For over 51 years, EC has been pioneering native plant horticulture in the Chesapeake Bay region. We look forward to providing you with quality plants and excellent, professional service.



## CONTACT INFORMATION & DRIVING DIRECTIONS



Environmental Concern Inc.  
P.O. Box P  
201 Boundary Lane  
St. Michaels, MD 21663  
**[www.wetland.org](http://www.wetland.org)**

Nursery Sales  
**[nursery-sales@wetland.org](mailto:nursery-sales@wetland.org)**



**MARYLAND**  
NURSERY, LANDSCAPE  
AND GREENHOUSE  
ASSOCIATION, INC.



From the north or the south:

- Take Route 50 to Easton, Maryland
- Just before entering Easton, follow Route 322 (the Easton Parkway) and proceed to Route 33 (St. Michaels Road)
- Turn at Route 33 and proceed 9 miles to St. Michaels
- Just before entering St. Michaels, turn left on Boundary Lane
- Follow Boundary Lane to Environmental Concern's sign on the right

Member of Maryland Nursery, Landscape and Greenhouse Association, Inc.

# 2023 WHOLESALE NURSERY CATALOG

## TERMS

EC's nursery sells wholesale to businesses, organizations and agencies related to the agriculture industry and to schools and special groups for green projects. We ask that our customers provide the appropriate business registration verification when placing orders. The nursery is open for business Monday-Friday from 8:00 am to 4:00 pm. Orders should be placed in advance by email or phone. The nursery is not able to accommodate walk-in customers.

## PAYMENTS

- A \$100 minimum is required for the first order.
- A 25% nonrefundable deposit is required on orders of \$100 or more to reserve your plants. Prices are guaranteed on quotes for 30 days, but a quote does not guarantee availability of plant material. An invoice will be emailed to you when your order is placed. You must provide an accurate email address upon ordering. Your order is only confirmed when we receive your 25% nonrefundable deposit or full payment of your invoice, unless other arrangements have been made.
- **All invoices must be paid in full prior to time of UPS shipping, EC delivery and prior to or at the time of pick up.**
- Payment may be made by check, cash, Visa, MasterCard, Discover or American Express.
- Prices are subject to change without notice.

## PLACING ORDERS

Email is the most efficient process for placing an order. Customers may also call (410) 745-9620 to place an order by phone. Please provide the species, size, quantity, destination, and date required in your email or when you call.





## PLANT ORDERS & SHIPPING

### DELIVERY & SHIPPING

EC's shipping and delivery process is dependent on the most cost effective and reliable method. If you have questions about shipping and delivery, please email the nursery to discuss the process that works best for your order.

#### UPS Ground shipping:

In addition to the actual shipping cost, an \$9.00 per box charge is added. EC's boxes are custom ordered, doublewalled, certified "Lesco" boxes, "tested and rated" for shipping plants. Plants are shipped Monday through Wednesday to ensure delivery by Friday. Our staff uses quality packing materials and has years of experience packing plants. Some plants are not available to ship due to size or other factors. We reserve the right to prune or cut back some species at certain times of the year to ensure safe packaging. When ordering plugs, a minimum of 50 (one tray) is required to request shipment by UPS.

#### EC's Vehicle delivery:

Delivery charges are based on the size of the order and the roundtrip mileage. The customer must provide assistance to unload plant material. Please email for a quote regarding delivery cost.

#### Customer Pickup:

Upon confirmation of the customer's order, a pickup date will be scheduled. Please notify EC at least 24 hours prior to pick up date if you will not be able to arrive as scheduled.(see "RESTOCKING/HOLDING FEE" below for additional information).

### RESTOCKING/HOLDING FEE

After your order is placed and paid for, the plants are taken out of EC's inventory. There will be a fee charged if orders are held beyond their original pick-up, delivery, or shipping date. In addition, an order scheduled for pick-up, delivery or shipping over 20 days from the date the order is confirmed is subject to a holding fee to be determined at the time of purchase. The fees cover the cost of maintaining your plants.

**The following fees will be applied to the total order if: refused at delivery; canceled or rescheduled or left waiting for pick-up.**

# of Days Past Original Order Date	Restocking/ Holding Fee	Note
1-20	15%	with less than 24 hours notice prior to a scheduled pick-up day, shipment or delivery*
21-39	20%	even if notice is given by customer
40+	40%	even if notice is given by customer; the order may be cancelled at the discretion of EC and all payments made will be forfeited unless an alternate, mutually agreed upon arrangement is approved.

*\*Additional notice is required if delivery requires overnight lodging by the driver.*



## GENERAL PLANT INFORMATION

### CLAIMS

Plants delivered by EC will be healthy upon receipt. Claims must be emailed to EC within 24 hours of receipt of material. No claims will be considered unless reported within this time frame. If damaged materials are received from UPS, this damage must be reported to the carrier immediately for their inspection. Pictures of the damage must accompany the notification to EC.

### PLANT HEALTH

In order to maintain maximum genetic diversity, all EC plant species are propagated from seed whenever possible. EC's plant material has been certified as free from dangerously injurious plant pests per annual inspection by the Maryland Department of Agriculture. A copy of our Nursery Inspection Certificate is available upon request.

### PLANT PROPAGATION

Most of the species listed in the catalog start from seed in plug trays. Seeds are cleaned and processed under proprietary protocols researched and developed by EC.

### CONTRACT GROWING NOTICE

EC understands the difficulty in securing plants for large installations. It is our goal to fill complete orders for our customers. As a result, we will accept orders for plants to be grown to specifications from four months to three years in advance. This is the best way to ensure that our customers receive what they need, when they need it, and at the fairest cost we can provide. If given enough lead time, we can make a reasonable attempt to grow native species not found in this catalog. If plants of local native species are needed, EC can collect seed at locations near your project site, with sufficient notice. Additional fees may apply. For more information on contract growing please contact Nursery Sales.

### ACCLIMATION TO HYDRIC SOILS

Many emergent, herbaceous wetland plant species are cultivated under flooded conditions during the growing season because of convenience and economy, rather than due to a requirement of the species or a need to acclimate the species. Some of these species are provided an aerobic (drained) condition during the dormant season, as they do not overwinter well in an anoxic condition. An additional charge will be added if salinity acclimation is requested. Contact nursery sales for details.

### REGARDING NATIVE PLANT SPECIES

**All of the herbaceous and woody plant species provided by EC's nursery are native to the Northeastern United States. (ME, NH, VT, MA, CT, RI, NY, NJ, PA, DE, MD, DC, VA, OH, WV and KY)**

Contact EC for confirmation of specific origin.

## GUIDE KEY

### WETLAND INDICATOR STATUS

For this catalog, we reference the Atlantic and Gulf Coastal Plain 2020 Final Regional Wetland Plant List from The National Wetland Plant List (Lichvar 2018).

- **Obligate Wetland (OBL)**: almost always occur in wetlands
- **Facultative Wetland (FACW)**: usually occur in wetlands, but may occur in non-wetlands
- **Facultative (FAC)**: occur in wetlands or non-wetlands
- **Facultative Upland (FACU)**: usually occur in non-wetlands, but may occur in wetlands
- **Obligate Upland (UPL)**: almost always occur in non-wetlands
- **Not Listed (NL)**

### WATER TOLERANCE

Water tolerance refers to 'Mean High Water' (MHW) and 'Mean Low Water' (MLW), for tidal areas. 'Mittide' is midway between MHW and MLW.

When a **range of water depth** is given (e.g. 0-6"; 0-1") it means that the species will tolerate that range of permanent water depths in nontidal wetlands.

Following are the four **nontidal regimes** that describe the duration of inundation or saturation that plants may tolerate.

1. **Permanent**: tolerates inundation or saturation from 76-100% of the growing season.
2. **Regular**: tolerates inundation or saturation from 26-75% of the growing season.
3. **Seasonal**: tolerates inundation or saturation from 13-25% of the growing season.
4. **Irregular**: tolerates inundation or saturation from 5-12% of the growing season.

### SALINITY TOLERANCE (ppt)

This catalog indicates the parts per thousand (ppt) concentration of salt in the water, or the range thereof, that each plant will tolerate. Freshwater has < 0.5 ppt salt, brackish water has 0.5 - 30 ppt salt, and saltwater has 30+ ppt salt. If the salinity tolerance is given as resistant it means that the plant tolerates infrequent flooding or spray by saltwater.

### LIGHT PREFERENCE

- ☐ Grows in full sun
- ☒ Grows in partial sun/shade
- ☐ Grows in full shade

### HEIGHT RANGE & AERIAL SPREAD

Both refer to the average mature plant size.

## HERBACEOUS PLANTS

Genus/Species Common Name	Available Sizes	Water Tolerance	Salinity Tolerance (ppt)
<b><i>Acorus americanus</i></b> sweet flag	2" plug	near MHW or regular inundation 0-6"	0 - 10
<b><i>Agastache foeniculum</i></b> anise hyssop	2" plug 1 quart pot	irregular inundation and upland	< 0.5
<b><i>Andropogon virginicus</i></b> broomsedge	2" plug 1 quart pot	irregular inundation and upland	< 0.5
<b><i>Aquilegia canadensis</i></b> red columbine	1 quart pot	irregular inundation and upland	< 0.5
<b><i>Asclepias incarnata</i></b> swamp milkweed	2" plug 1 quart pot 1 gallon pot	seasonal inundation	0 - 5
<b><i>Asclepias tuberosa</i></b> butterfly milkweed	2" plug 1 quart pot 1 gallon pot	irregular inundation and upland	< 0.5
<b><i>Baptisia australis</i></b> blue false indigo	1 quart pot 1 gallon pot	irregular inundation and upland	< 0.5
<b><i>Baptisia tinctoria</i></b> yellow blue indigo	1 quart pot	irregular inundation and upland	< 0.5
<b><i>Carex crinita</i></b> fringed sedge	2" plug	irregular inundation	< 0.5
<b><i>Carex pensylvanica</i></b> Pennsylvania sedge	1 quart pot	upland	< 0.5
<b><i>Carex stricta</i></b> tussock sedge	2" plug 1 quart pot	regular inundation 0-6"	< 0.5
<b><i>Chasmanthium latifolium</i></b> northern sea oats	2" plug 1 quart pot 1 gallon pot	seasonal inundation and upland	< 0.5



Wetland Indicator Status	Light	Height Range	Rate of Spread	Comments
OBL	☉	2 - 3'	medium	spicy scented leaves; inconspicuous green spathe Apr-May; forms clumps; acidic conditions; leaves similar to iris
NL	☉	2 - 4'	medium	spikes of blue/purple flowers June-Sept; licorice-scented foliage; requires good drainage and tolerates drought
FAC	◯	1 - 3'	slow	grows in clumps; persistent in winter; provides seed for upland game
FACU	☉	1 - 3'	medium	delicate, drooping red flowers Apr-July; best in moist, well-drained soils with some shade; attracts pollinators (pH 6.8-7.2)
OBL	☉	4 - 6'	slow	pale pink flowers in umbels June-Aug; nectar source for butterflies and beneficial insects
NL	☉	1 - 3'	slow	orange blooms May-July; attracts butterflies and beneficial insects
FACU	◯	3 - 4'	medium	blue-purple flowers Apr-July; nitrogen fixer; shrub like form; tolerates poor soils; attracts pollinators
NL	☉	1 - 3'	slow	yellow flowers May-Sept; nitrogen fixer; tolerates poor soils; attracts pollinators
FACW	☉	1 - 3'	medium	forms clumps of grass-like densely tufted culms; good for shady wetlands; drooping seed heads
NL	☿	0.5 - 1.5'	medium	forms tufts of fine textured leaves; good ground cover; attracts song birds and waterfowl; deer resistant
OBL	◯	2 - 4'	medium	grows in clumps; tolerates flooding to 6"; very high wildlife food value (pH 3.5-7)
FAC	☉	1.5 - 5'	medium	attractive seed heads eaten by birds and small mammals; butterfly host plant; provides good texture

HERBACEOUS PLANTS

Genus/Species Common Name	Available Sizes	Water Tolerance	Salinity Tolerance (ppt)
<i>Chelone glabra</i> white turtlehead	2" plug 1 quart pot	irregular to permanent inundation	< 0.5
<i>Conoclinium coelestinum</i> purple mistflower	2" plug 1 quart pot 1 gallon pot	seasonal inundation and upland	< 0.5
<i>Dennstaedtia punctilobula</i> hay-scented fern	1 gallon pot	upland	< 0.5
<i>Distichlis spicata</i> spike grass	2" plug	above MHW	0 - 50
<i>Dryopteris marginalis</i> marginal shield fern	1 gallon pot	irregular inundation and upland	< 0.5
<i>Echinacea purpurea</i> purple coneflower	2" plug 1 quart pot 1 gallon pot	upland	< 0.5
<i>Eupatorium perfoliatum</i> boneset	2" plug 1 quart pot	irregular inundation and upland	< 0.5
<i>Eutrochium dubium</i> coastal joe-pye weed	2" plug 1 quart pot 1 gallon pot	seasonal inundation and upland	< 0.5
<i>Eutrochium purpureum</i> sweet-scented joe-pye weed	2" plug 1 quart pot	irregular inundation and upland	< 0.5
<i>Geranium maculatum</i> wild geranium	1 quart pot	upland	< 0.5
< Y Yb j i a ' U i h i a b U Y ^ ^     [ , Á } ^ ^ : ^ , ^ ^ å	2" plug 1 quart pot	irregular to permanent inundation	< 0.5
< Y J U b H i g ' a n g u s t i f o l i u s • , æ ] Á ~ } - [ , ^ i	2" plug 1 quart pot 1 gallon pot	irregular to permanent inundation	< 0.5

Wetland Indicator Status	Light	Height Range	Rate of Spread	Comments
OBL	○◐	1.5 - 4'	medium	blooms white tinged with pale pink resembling turtles; butterfly host plant; enjoyed by hummingbirds
FAC	◐●	1 - 3'	medium	blue to purple fine-textured blooms July-Oct; can form dense stands; attracts beneficial insects (pH 5.5-7.5)
UPL	○◐	1 - 3'	medium	ground cover; fragrant when crushed; fronds turn yellow in fall; habitat for birds and bees
OBL	○	8 - 16"	rapid	flowers Aug-Oct; often intermixed with <i>Spartina patens</i> and found in high salinity depressions
FACU	◐●	1 - 3'	slow	evergreen fern with grayish-green leathery fronds; moist but well-drained soils best but tolerant of dry conditions once established
NL	○◐	2 - 5'	medium	purplish-pink flowers June-Aug; seed heads attract birds and butterflies; prefers full sun and well drained soils
FACW	○◐●	2 - 5'	slow	small, white flowers July-Oct; large clump forming plant; leaves prone to scorching if plants dry out; attracts pollinators
FACW	○◐	2 - 5'	slow	small purple flowers in clusters July-Sept; nectar source for butterflies and beneficial insects
FAC	○◐	2 - 6.5'	slow	pale pinkish-purple flowers July-Oct; fragrant foliage; attracts songbirds and a variety of pollinators
FACU	○◐	1.5 - 2'	slow	pink/lavender flowers Apr-July; attracts bees and other beneficial insects; may become dormant in hot weather
FACW	○◐	1.5 - 6'	medium	vibrant yellow blooms July-Nov; attracts butterflies; best in moist to wet soils; good rain garden plant
FACW	○	1.5 - 5.5'	medium	showy yellow flowers late summer into fall; good for rain gardens, nectar attracts butterflies and songbirds



## HERBACEOUS PLANTS

Genus/Species Common Name	Available Sizes	Water Tolerance	Salinity Tolerance (ppt)
<i>Hibiscus moscheutos</i> marsh hibiscus	2" plug 1 quart pot 1 gallon pot	near MHW or regular inundation 0-3"	0 - 15
<i>Iris versicolor</i> blue flag iris	2" plug 1 quart pot 1 gallon pot	regular inundation 0-6"	< 0.5
<i>Juncus effusus</i> soft rush	2" plug 1 quart pot	MHW and above or irregular inundation	< 0.5
<i>Juncus gerardii</i> saltmeadow rush	2" plug	near MHW	0 - 32
<i>Juncus roemerianus</i> black needlerush	2" plug	near MHW	0 - 35
<i>Kosteletzkya virginica</i> seashore mallow	2" plug 1 quart pot 1 gallon pot	above MHW or irregular inundation	0 - 10
<i>Liatris spicata</i> blazing star	2" plug 1 quart pot	seasonal inundation and upland	< 0.5
<i>Lobelia cardinalis</i> cardinal flower	2" plug 1 quart pot	near MHW and upland	< 0.5
<i>Lobelia siphilitica</i> great blue lobelia	2" plug 1 quart pot	irregular inundation	< 0.5
<i>Monarda fistulosa</i> wild bergamot	2" plug 1 quart pot	seasonal to regular inundation	< 0.5
<i>Muhlenbergia capillaris</i> pink muhly	1 quart pot 1 gallon pot	irregular inundation	0 - 5
<i>Onoclea sensibilis</i> sensitive fern	1 gallon pot	irregular to permanent inundation	< 0.5

Wetland Indicator Status	Light	Height Range	Rate of Spread	Comments
OBL	○●	4 - 7'	slow	white/pink/red flowers in late summer; seed capsules through winter; nectar source for ruby-throated hummingbirds
OBL	○●	1 - 3'	slow	showy flowers late spring; forms clumps; deer resistant; tolerant of wet clay soils; flowers best in full sun to light shade
OBL	○●	3 - 4'	slow	clumping habit; often grows in tussocks or hummocks; food source for muskrats; dark green foliage; shelter for birds
OBL	○	0.5 - 3'	slow	forms tight colonies; dark green foliage with slender round stems; found primarily in tidal brackish marshes; beneficial to waterfowl
OBL	○	1 - 4'	medium	flowers May-Oct; good marsh stabilizer; provides cover and nesting sites for marsh animals
NL	○	2 - 4'	slow	showy pink flowers July-Sept on tall plants; gray-green leaves; adaptable to heavy wet soils; attracts hummingbirds
FAC	○●	1 - 6.5'	slow	bright purple spiked blooms July-Aug; clump forming grass-like leaves; attracts songbirds and a variety of pollinators
FACW	○●	up to 5'	slow	attractive scarlet flowers in spikes; blooms July-Oct; needs consistently moist or wet soils; nectar supply for hummingbirds
OBL	●●	up to 3'	slow	bright blue flowers on 2-3' spikes Aug-Oct; blooms in shade; needs abundant soil moisture; deer tolerant; attracts pollinators
FACU	○●	1.5 - 5'	slow	fragrant pinkish-purple flowers June-Sept; gray-green foliage; best in dry, well-drained soils; attracts hummingbirds and butterflies; deer tolerant
FAC	○●	3 - 4'	medium	dark green leaves; pink-purple flower spikes; heat, drought, poor soil tolerant; attracts beneficial insects
FACW	●●	up to 3'	medium	needs consistent moisture; may spread in wet sites; highly sensitive to drought and first fall frost

## HERBACEOUS PLANTS

Genus/Species Common Name	Available Sizes	Water Tolerance	Salinity Tolerance (ppt)
<i>Osmunda regalis</i> royal fern	1 gallon pot	irregular to permanent inundation	< 0.5
<i>Panicum amarum</i> coastal panic grass	2" plug 1 quart pot	irregular inundation and upland	resistant
<i>Panicum virgatum</i> switchgrass	2" plug 1 quart pot	MHW to upland	0 - 10
<i>Peltandra virginica</i> arrow arum	2" plug 1 quart pot	permanent 1-18" inundation	0 - 1
<i>Penstemon digitalis</i> beardtongue	2" plug 1 quart pot 1 gallon pot	seasonal inundation to upland	< 0.5
<i>Phlox paniculata</i> fall phlox	1 quart pot	upland	< 0.5
<i>Pontederia cordata</i> pickerelweed	2" plug 1 quart pot	permanent 1-12" inundation	< 0.5
<i>Pycnanthemum muticum</i> mountain mint	2" plug 1 quart pot	seasonal inundation to upland	< 0.5
<i>Pycnanthemum virginianum</i> Virginia mountain mint	2" plug 1 quart pot	seasonal inundation to upland	< 0.5
<i>Rudbeckia fulgida</i> orange coneflower	2" plug 1 quart pot 1 gallon pot	irregular inundation and upland	< 0.5
<i>Sagittaria latifolia</i> duck potato	2" plug	permanent inundation 0-18"	< 0.5
<i>Saururus cernuus</i> lizard's tail	2" plug 1 quart pot	permanent inundation 0-12"	< 0.5



Wetland Indicator Status	Light	Height Range	Rate of Spread	Comments
OBL	●●	up to 6'	slow	forms clumps; best in medium to wet soils; food source for upland game birds and mammals
FAC	○	1.5 - 6'	rapid	deep-rooted clumping grass; grows best on coastal shores and dunes; tolerates drought; provides food and cover for wildlife
FAC	○●	2 - 4'	slow	clumping grass; delicate texture; ornamental particularly in winter; very high wildlife value; flowers July-Sept
OBL	○●	2 - 3'	slow	attractive, statuesque accent; inconspicuous green flower in late spring; seed preferred by wood ducks
FAC	○●	2 - 4'	medium	white to pinkish flowers spring to early summer; leaves redish to purple in cooler temps; ornamental value in meadows; attracts pollinators
FACU	○●	3-6'	slow	pink/lavender flowers July-Sept; best in moist soils; not drought tolerant; attracts hummingbirds
OBL	○●	1 - 3.5'	medium	heart-shaped leaves; showy blue flowers in spikes June-Nov; of some interest to black and wood ducks
FAC	○●	1 - 3'	rapid	pink flowers with silvery-leaf like bracts July-Sept; aromatic foliage; beneficial for pollinators; tolerates clay soils
FAC	○●	2 - 4'	rapid	clusters of tiny white flowers July-Sept; blooms best in well-drained soil in full sun; aromatic foliage; beneficial to pollinators
FAC	○●	1.5 - 3.5'	medium	yellow-orange blooms (dark brown center) July-Oct; attracts songbirds and a variety of pollinators
OBL	○●	up to 4'	rapid	arrow shaped leaves; white flowers on stalk July-Sept; underground tuber preferred by at least 15 species of ducks
OBL	○●	up to 4'	rapid	attractive, nodding white flowers in spikes June-Sept; valued by wood ducks; colonizes large areas; drought resistant

## HERBACEOUS PLANTS

Genus/Species Common Name	Available Sizes	Water Tolerance	Salinity Tolerance (ppt)
<b><i>Schizachyrium scoparium</i></b> little bluestem	2" plug 1 quart pot	MHW to upland	< 0.5
<b><i>Schoenoplectus pungens</i></b> three-square bulrush	2" plug 1 quart pot	permanent inundation 0-12"	0 - 15
<b><i>Schoenoplectus robustus</i></b> sturdy or saltmarsh bulrush	2" plug 1 quart pot	near MHW	0 - 30
<b><i>Schoenoplectus tabernaemontani</i></b> softstem bulrush	2" plug 1 quart pot	permanent inundation 0-12"	0 - 5
<b><i>Scutellaria incana</i></b> hoary skullcap	1 quart pot	upland	< 0.5
<b><i>Spartina alterniflora/</i></b> <b><i>Sporobolus alterniflorus</i></b> smooth cordgrass	2" plug 1 quart pot	mid-tide to MHW	0 - 35
<b><i>Spartina patens/</i></b> <b><i>Sporobolus pumilus</i></b> salt meadow hay	2" plug 1 quart pot	above MHW	0 - 35
<b><i>Symphyotrichum novae-angliae</i></b> New England aster	2" plug 1 quart pot 1 gallon pot	irregular inundation and upland	0 - 5
<b><i>Symphyotrichum novi-belgii</i></b> New York aster	2" plug 1 quart pot 1 gallon pot	irregular inundation and upland	< 0.5
<b><i>Trillium grandiflorum</i></b> great white trillium	1 quart pot	upland	< 0.5
<b><i>Vernonia noveboracensis</i></b> New York Ironweed	2" plug 1 quart pot	seasonal inundation	< 0.5
<b><i>Zizia aurea</i></b> golden Alexander	1 quart pot	upland	< 0.5

Wetland Indicator Status	Light	Height Range	Rate of Spread	Comments
FACU	○	2 - 3'	slow	clumping grass with delicate texture; bronze/tan fall color; low maintenance; tolerates high heat; beneficial to wildlife
OBL	○	up to 4'	rapid	erect, triangular stems; heavy predation by muskrat, nutria, geese; birds eat seeds; flowers June-Sept
OBL	○	up to 4'	rapid	triangular stems; moderate wildlife value; does well in fluctuating salinity; flowers July-Oct
OBL	○	6 - 10'	rapid	tube-like stems; drooping seed clusters at top; good vertical accent; moderate wildlife value; flowers June-Sept
NL	○●●	1.5 - 3.5'	medium	blue-violet flower spikes June-Sept; attracts hummingbirds and other pollinators; deer and rabbit resistant; drought-tolerant once established
OBL	○	4 - 7'	rapid	tidal salt marsh grass; useful in shore erosion control and stabilization; rhizomes eaten by muskrat and geese
FACW	○	1 - 3'	medium	saltwater and brackish grass; grows in high marsh not regularly flooded; shore erosion control; tolerates drought once established; nesting sites for wildlife
FACW	○●	3 - 6'	slow	light pink-purple flowers July-Oct or until frost; hairy leaves; nectar source for monarch and other butterflies (pH < 6.8)
OBL	○●	3 - 6'	slow	deep pink-purple flowers in large flower heads July-Oct; smooth gray-green leaves; grows in part sun and sandy or clay soils; nectar source for butterflies
NL	●	0.5 - 1.5'	medium	waxy white flowers face to pink Apr-June; woodland wildflower that grows in moist but well-drained soils high in organic matter; dormant in summer
FACW	○●	3 - 7'	slow	vivid purple flowers in heads Aug-Sept; tall narrow plant; flowers attract butterflies; seed heads attract birds
FAC	○●●	1 - 3'	medium	yellow umbel flowers May-June; basal or stem leaves are compound biternate with toothed leaves; attracts pollinators

## SHRUBS/TREES

Genus/Species Common Name	Available Sizes	Water Tolerance	Salinity Tolerance (ppt)
<b><i>Aronia melanocarpa</i></b> black chokeberry	1 gallon 2 gallon 3 gallon	irregular to seasonal inundation	resistant
<b><i>Asimina triloba</i></b> paw-paw	1 gallon 2 gallon 3 gallon	irregular to seasonal inundation	< 0.5
<b><i>Baccharis halimifolia</i></b> groundsel tree	1 gallon 2 gallon 3 gallon	above MHW or seasonal inundation	0 - 15
<b><i>Betula nigra</i></b> river birch	1 gallon 2 gallon 3 gallon	seasonal inundation	< 0.5
<b><i>Ceanothus americanus</i></b> New Jersey tea	1 gallon 2 gallon 3 gallon	upland	< 0.5
<b><i>Cephalanthus occidentalis</i></b> buttonbush	1 gallon 2 gallon 3 gallon	MHW and above or permanent inundation 0-12"	resistant
<b><i>Cornus amomum</i></b> silky dogwood	1 gallon 2 gallon 3 gallon	seasonal inundation	< 0.5
<b><i>Cornus racemosa</i></b> gray twig dogwood	1 gallon 2 gallon 3 gallon	seasonal inundation	< 0.5
<b><i>Diospyros virginiana</i></b> persimmon	1 gallon 2 gallon 3 gallon	irregular inundation	< 0.5

Wetland Indicator Status	Light	Height	Spread	Comments
FAC	○●	3 - 6'	3 - 6'	white flowers in May; black fruit Sept-Nov; eaten by songbirds; edible to humans; tolerates acidic soils (pH 5.1-6.5)
FAC	○●	20 - 35'	20 - 35'	reddish-brown flowers in Apr-June; edible fruit Aug-Sept; host for zebra swallowtail; tolerates frost and deer
FAC	○	6 - 12'	6 - 12'	gray-green foliage; clusters of white flowers Aug-Sept; good for stabilization of poor soils; wildlife cover; tolerates alkaline soils (pH 7.0-8.5)
FACW	○	50 - 75'	35 - 50'	deciduous; attractive bark and yellow fall foliage; used in forested riparian buffers and erosion control (pH 4.0-6.5)
NL	○●	3'	3 - 5'	densely branched; fragrant white flowers May-Sept; gray-green leaves; nitrogen fixer, required good drainage; benefits pollinators (pH 4.3-6.5)
OBL	○●●	6 - 12'	12 - 15'	numerous tubular flowers in ball-shaped heads May-Aug; few flowers in full shade; attracts hummingbirds, butterflies and beneficial insects; best in moist to wet sites (pH 6.1-8.5)
FACW	○●	6 - 12'	6 - 12'	yellowish white flowers May-June; white berries that turn blue in August; very high food value to many songbirds and mammals tolerates shade; may form thickets
FAC	○●●	6 - 12'	6 - 12'	white flowers May-June; white berries Aug-Sept, very high food value to songbirds, waterfowl, mammals
FAC	○●	50 - 75'	35 - 50'	adaptable tree, size varies based on location; yellow flowers in June; 1-2" orange fruit in fall; trees are usually dioecious; dark gray forms a deep tap root

## SHRUBS/TREES

Genus/Species Common Name	Available Sizes	Water Tolerance	Salinity Tolerance (ppt)
<b><i>Ilex glabra</i></b> inkberry	1 gallon 2 gallon 3 gallon	seasonal inundation	< 0.5
<b><i>Itea virginica</i></b> Virginia sweetspire	1 gallon 2 gallon 3 gallon	regular to seasonal inundation	< 0.5
<b><i>Iva frutescens</i></b> high tide bush	1 gallon 2 gallon 3 gallon	above MHW to upland	0 - 15
<b><i>Lindera benzoin</i></b> spicebush	1 gallon 2 gallon 3 gallon	seasonal inundation	resistant
<b><i>Morella pensylvanica</i></b> northern bayberry	1 gallon 2 gallon 3 gallon	above MHW or irregular inundation	0 - 20
<b><i>Platanus occidentalis</i></b> American sycamore	1 gallon 2 gallon 3 gallon	irregular to seasonal inundation	< 0.5
<b><i>Prunus maritima</i></b> beach plum	1 gallon 2 gallon 3 gallon	upland	resistant
<b><i>Quercus bicolor</i></b> swamp white oak	1 gallon 2 gallon 3 gallon	seasonal inundation	< 0.5
<b><i>Quercus palustris</i></b> pin oak	1 gallon 2 gallon 3 gallon	seasonal inundation	< 0.5



Wetland Indicator Status	Light	Height	Spread	Comments
FACW	○●	6 - 12'	6 - 12'	evergreen; small, shiny leaves with black berries (on female plants); provides emergency winter food and cover for birds and mammals; fairly insensitive to disease and insect damage (pH 4.5-6.0)
FACW	○●●	6 - 12'	6 - 12'	dense, upright, terminal, tassel-like, white spikes June-July; swamps wet coastal areas; reliable red fall color (pH 5.0-7.0)
FACW	○	2 - 10'	6 - 12'	flowers Aug-Sept; attracts birds; similar to <i>Baccharis halimifolia</i> but with opposite leaves (pH 5-5.7)
FACW	●●	6 - 12'	6 - 12'	fragrant foliage; scarlet berries in Sept; very high food value for birds; deer browse twigs and foliage; tolerates acidic soils
FAC	○●	6 - 15'	6 - 15'	semi-evergreen; fragrant, white 2-3" flowers May-June; scarlet seeds in slits of erect follicles; flowers best full shade to partial sun; tolerates wet, boggy sites
FACW	○●	75 - 100'	75 - 100'	very large tree; showy exfoliating bark; large leaves 4-10" wide; good rain garden tree; susceptible to sycamore anthracnose (pH 4.9-6.5)
NL	○●	1 - 8'	3 - 6'	white flowers Apr-May; blue-purple edible fruit Aug-Oct; prefers well drained sandy soils in full sun; useful for dune restoration and stabilization (pH 5.8-7.7)
FACW	○●	60 - 100'	50 - 75'	bicolor leaves - darker green above, lighter beneath; among oaks transplants relatively easily and grows rapidly; tolerates poor drainage; high wildlife value (pH 4.3-6.5)
FACW	○	50 - 80'	50 - 75'	straight trunk with broad crown; slender pin-like twigs; pyramidal growth habit; prefers acidic soils; beneficial to many birds and other wildlife

SHRUBS/TREES

Genus/Species Common Name	Available Sizes	Water Tolerance	Salinity Tolerance (ppt)
<i>Quercus phellos</i> willow oak	1 gallon 2 gallon 3 gallon	seasonal inundation	< 0.5
<i>Sambucus nigra ssp. canadensis</i> elderberry	1 gallon 2 gallon 3 gallon	seasonal inundation	< 0.5
<i>Vaccinium corymbosum</i> highbush blueberry	1 gallon 2 gallon 3 gallon	seasonal inundation	resistant
<i>Viburnum dentatum</i> arrowwood	1 gallon 2 gallon 3 gallon	seasonal inundation	resistant
<i>Viburnum nudum</i> possum-haw viburnum	1 gallon 2 gallon 3 gallon	seasonal or regular inundation	< 0.5
<i>Viburnum prunifolium</i> black haw viburnum	1 gallon 2 gallon 3 gallon	irregular inundation	< 0.5



Wetland Indicator Status	Light	Height	Spread	Comments
FACW	○●	80 - 100'	30 - 40'	straight tall trunk; willow-like leaves with no lobes or undulations; rapid growth in good sites; acorns valuable food source for birds and other wildlife
FACW	○●●	6 - 12'	6 - 12'	sends out suckers; small, white flowers in large flat-topped clusters; purple berries Aug-Sept; relished by birds
FACW	○●●	12'	4 - 6'	white, urn-shaped flowers Apr-July; berries are a valuable food source for many species of wildlife; demands acidic soils
FAC	○●	10 - 15'	6 - 12'	white flowers May-June; coarsely toothed leaf margins; blue fruit Sept-Nov; valuable to birds and small mammals (pH 5.1-6.5)
FACW	○●●	6 - 20'	12 - 15'	small, broad, flat-topped clusters of white flowers in June-July; football shaped berries turning pink then blue; moist soils, thickets and swamps (pH 5.1-6.0)
FACU	○●●	12 - 24'	6 - 15'	large shrub/small tree; white flower clusters in spring; yellow berries turn blue-black; red/purple fall leaf color; good hedge plant (pH 6.8-7.2)



## Herbaceous Wetland Species Selection Guide

Use this guide to determine which species are options in your wetland environment. Species listed are all available from Environmental Concern.

### WETLAND CHARACTERISTICS

#### Brackish to Saltwater Full Sun

##### Water Depth Above MHW

##### Grasses/Grass-like

*Distichlis spicata*  
*Panicum amarum*  
*Panicum virgatum*  
*Spartina patens*

##### Flowering

*Hibiscus moscheutos*  
*Kosteletzkya virginica*

##### Water Depth At MHW

##### Grasses/Grass-like

*Distichlis spicata*  
*Spartina patens*  
*Juncus gerardii*  
*Juncus roemerianus*  
*Schoenoplectus robustus*  
*Spartina alterniflora*

##### Flowering

*Hibiscus moscheutos*  
*Kosteletzkya virginica*

##### Water Depth Below MHW

##### Grasses/Grass-like

*Spartina alterniflora*



*Panicum amarum*



# WETLAND CHARACTERISTICS

## Freshwater Full Sun

### Water Depth/ Flooding Frequency Seasonal Inundation

#### Grasses/Grass-like

<i>Carex crinita</i>	<i>Panicum amarum</i>
<i>Chasmanthium latifolium</i>	<i>Panicum virgatum</i>

#### Flowering

<i>Asclepias incarnata</i>	<i>Liatris spicata</i>
<i>Chelone glabra</i>	<i>Lobelia cardinalis</i>
<i>Conoclinium coelestinum</i>	<i>Lobelia siphilitica</i>
<i>Eutrochium dubium</i>	<i>Monarda fistulosa</i>
<i>Eutrochium purpureum</i>	<i>Penstemon digitalis</i>
<i>Helenium autumnale</i>	<i>Pycnanthemum muticum</i>
<i>Helianthus angustifolius</i>	<i>Pycnanthemum virginianum</i>
<i>Hibiscus moscheutos</i>	<i>Rudbeckia fulgida</i>
<i>Kosteletzkya virginica</i>	<i>Vernonia noveboracensis</i>

#### **Ferns**

*Onoclea sensibilis*



*Penstemon digitalis*

# WETLAND CHARACTERISTICS

## Freshwater Full Sun

Water Depth/ Flooding Frequency  
Irregular (only during large storms)

### Grasses/Grass-like

<i>Andropogon virginicus</i>	<i>Panicum amarum</i>
<i>Carex crinita</i>	<i>Panicum virgatum</i>
<i>Chasmanthium latifolium</i>	<i>Schizachyrium scoparium</i>

### Flowering

<i>Agastache foeniculum</i>	<i>Hibiscus moscheutos</i>
<i>Aquilegia canadensis</i>	<i>Kosteletzkya virginica</i>
<i>Asclepias incarnata</i>	<i>Liatris spicata</i>
<i>Asclepias tuberosa</i>	<i>Lobelia cardinalis</i>
<i>Baptisa australis</i>	<i>Lobelia siphilitica</i>
<i>Baptisia tinctoria</i>	<i>Monarda fistulosa</i>
<i>Chelone glabra</i>	<i>Penstemon digitalis</i>
<i>Conoclinium coelestinum</i>	<i>Pycnanthemum muticum</i>
<i>Eupatorium perfoliatum</i>	<i>Pycnanthemum virginianum</i>
<i>Eutrochium dubium</i>	<i>Rudbeckia fulgida</i>
<i>Eutrochium purpureum</i>	<i>Symphotrichum novae-angliae</i>
<i>Helenium autumnale</i>	<i>Vernonia noveboracensis</i>
<i>Helianthus angustifolius</i>	

### Ferns

*Onoclea sensibilis*



*Scutellaria incana*



*Vernonia noveboracensis*



# WETLAND CHARACTERISTICS

## Freshwater Full Sun

### Water Depth/Flooding Frequency 0-3" Permanent

#### Grasses/Grass-like

*Acorus americanus*

*Carex stricta*

*Juncus effusus*

*Schoenoplectus pungens*

*Schoenoplectus tabernaemontani*

#### Flowering

*Chelone glabra*

*Helenium autumnale*

*Helianthus angustifolius*

*Hibiscus moscheutos*

*Iris versicolor*

*Lobelia cardinalis*

*Lobelia siphilitica*

*Peltandra virginica*

*Pontederia cordata*

*Sagittaria latifolia*

*Saururus cernuus*

#### Ferns

*Onoclea sensibilis*

*Osmundus regalis*

### Water Depth/Flooding Frequency 3-6" Permanent

Greater than 6" planting depth-  
depth-suggest quarts, not plugs

#### Grasses/Grass-like

*Acorus americanus*

*Carex stricta*

*Schoenoplectus pungens*

*Schoenoplectus tabernaemontani*

#### Flowering

*Helenium autumnale*

*Hibiscus moscheutos*

*Iris versicolor*

*Peltandra virginica*

*Pontederia cordata*

*Saururus cernuus*

#### Ferns

*Osmunda regalis*

### Water Depth/Flooding Frequency 6-12" Permanent

Greater than 6" planting depth-  
suggest quarts, not plugs

#### Grasses/Grass-like

*Acorus americanus*

*Carex stricta*

*Schoenoplectus tabernaemontani*

#### Flowering

*Peltandra virginica*

*Pontederia cordata*

*Sagittaria latifolia*

*Saururus cernuus*

## Freshwater Shade

#### Grasses/Grass-like

*Carex crinita*

*Carex stricta*

#### Flowering

*Chelone glabra*

*Conoclinium coelestinum*

*Helenium autumnale*

*Lobelia cardinalis*

*Lobelia siphilitica*

*Peltandra virginica*

#### Ferns

*Onoclea sensibilis*

*Osmunda regalis*