2022 Wholesale Nursery Catalog





Celebrating

50 Years

Visit us online at www.wetland.org



ENVIRONMENTAL CONCERN INC.

Celebrating over 50 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 50 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

Phone: (410) 745-9620

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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.

2022 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

Phone: (410) 745-9620

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 \$8.00 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; cancelled 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

Phone: (410) 745-9620

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 2018 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. 'Midtide' 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.

Genus/Species Common Name	Available Sizes	Water Tolerance	Salinity Tolerance (ppt)
Acorus americanus sweet flag	2" plug 1 quart pot	near MHW or regular inundation 0-6"	0 - 10
Agastache foeniculum anise hyssop	2" plug 1 quart pot	irregular inundation and upland	< 0.5
Alisma subcordatum water plantain	2" plug	regular to permanent inundation 0-12"	< 0.5
Andropogon virginicus broomsedge	2" plug 1 quart pot	irregular inundation and upland	< 0.5
Aquilegia canadensis red columbine	1 quart pot	irregular inundation and upland	< 0.5
Asarum canadensis wild ginger	1 quart pot	upland	< 0.5
Asclepias incarnata swamp milkweed	2" plug 1 quart pot 1 gallon pot	seasonal inundation	0 - 5
Asclepias tuberosa butterfly milkweed	2" plug 1 quart pot 1 gallon pot	irregular inundation and upland	< 0.5
Baptisia australis blue false indigo	1 quart pot 1 gallon pot	irregular inundation and upland	< 0.5
Baptisia tinctoria yellow wild indigo	1 quart pot	irregular inundation and upland	< 0.5
Boltonia asteroides false aster	1 quart pot 1 gallon pot	seasonal to irregular inundation	< 0.5
Carex crinita fringed sedge	2" plug	irregular inundation	< 0.5

Wetland Indicator Status	Light	Height Range	Rate of Spread	Comments
OBL	00	2 - 3'	medium	spicy scented leaves; inconspicuous green spathe Apr-May; forms clumps; acidic conditions; leaves similar to iris
NL	0	2 - 4'	medium	spikes of blue/purple flowers June-Sept; licorice-scented foliage; requires good drainage and tolerates drought
OBL	0	up to 3.5'	medium	tends to grow in clusters; white flowers June-Sept (pH 5.0-7.0)
FAC	0	1 - 3'	slow	grows in clumps; persistent in winter; provides seed for upland game
FACU	00	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)
UPL	•	0.5 - 1'	slow	fragrant ground cover; tolerates heavy shade; food source for the pipevine swallowtail butterfly; deer resistant
OBL	00	4 - 6'	slow	pale pink flowers in umbels June-Aug; nectar source for butterflies and beneficial insects
NL	0	1 - 3'	slow	orange blooms May-July; attracts butterflies and beneficial insects
FACU	0	3 - 4'	medium	blue-purple flowers Apr-July; nitrogen fixer; shrub like form; tolerates poor soils; attracts pollinators
NL	0	1 - 3'	slow	yellow flowers May-Sept; nitrogen fixer; tolerates poor soils; attracts pollinators
FACW	00	0.5 - 2.5'	rapid	small white aster-like flowers July-Sept; adapts to wide range of soils and moisture levels; deer resistant; attracts pollinators
FACW	00	1 - 3'	medium	forms clumps of grass-like densely tufted culms; good for shady wetlands; drooping seed heads

Genus/Species Common Name	Available Sizes	Water Tolerance	Salinity Tolerance (ppt)
Carex lurida lurid sedge	2" plug	irregular inundation	< 0.5
Carex pensylvanica Pennsylvania sedge	1 quart pot	upland	< 0.5
Carex stricta tussock sedge	2" plug 1 quart pot	regular inundation 0-6"	< 0.5
Carex vulpinoidea fox sedge	2" plug	regular inundation 0-6"	< 0.5
Chasmanthium latifolium northern sea oats	2" plug 1 quart pot 1 gallon pot	seasonal inundation and upland	< 0.5
Chelone glabra white turtlehead	2" plug 1 quart pot	irregular to permanent inundation	< 0.5
Chrysogonum virginianum green and gold	1 quart pot	upland	< 0.5
Conoclinium coelestinum purple mistflower	2" plug 1 quart pot 1 gallon pot	seasonal inundation and upland	< 0.5
Dennstaedtia punctilobula hay-scented fern	1 gallon pot	upland	< 0.5
Distichlis spicata spike grass	2" plug	above MHW	0 - 50
Dryopteris marginalis marginal shield fern	1 gallon pot	irregular inundation and upland	< 0.5
Echinacea purpurea purple coneflower	2" plug 1 quart pot 1 gallon pot	upland	< 0.5

Wetland Indicator Status	Light	Height Range	Rate of Spread	Comments
OBL	00	1 - 3.5'	medium	large wetland sedge; grows in clumps; forms a tuft of basal leaves and culms that are up to 2.5' long (pH 4.9-6.8)
NL	0	0.5 - 1.5'	medium	forms tufts of fine textured leaves; good ground cover; attracts song birds and waterfowl; deer resistant
OBL	0	2 - 4'	medium	grows in clumps; tolerates flooding to 6"; very high wildlife food value (pH 3.5-7)
FACW	00	up to 3.5'	slow	grows in fine textured clumps; light green foliage; tolerates flooding to 6"; provides food for many bird species (pH 6.8-8.9)
FAC	00	1.5 - 5'	medium	attractive seed heads eaten by birds and small mammals; butterfly host plant; provides good texture
OBL	00	1.5 - 4'	medium	blooms white tinged with pale pink resembling turtles; butterfly host plant; enjoyed by hummingbirds
NL	30	up to 1'	medium	showy bright yellow flowers Mar-June; hairy leaves; semi-evergreen; may spread to form woodland groundcover (pH < 6.8)
FAC	3 •	1 - 3'	medium	blue to purple fine-textured blooms July- Oct; can form dense stands; attracts beneficial insects (pH 5.5-7.5)
UPL	00	1 - 3'	medium	ground cover; fragrant when crushed; fronds turn yellow in fall; habitat for birds and bees
OBL	0	8 - 16"	rapid	flowers Aug-Oct; often intermixed with Spartina patens and found in high salinity depressions
FACU	0 •	1 - 3'	slow	evergreen fern with grayish-green leathery fronds; moist but well-drained soils best but tolerant of dry conditions once established
NL	00	2 - 5'	medium	purplish-pink flowers June-Aug; seed heads attract birds and butterflies; prefers full sun and well drained soils

Genus/Species Common Name	Available Sizes	Water Tolerance	Salinity Tolerance (ppt)
Eupatorium perfoliatum boneset	2" plug 1 quart pot	irregular inundation and upland	< 0.5
Eutrochium dubium coastal plain joe-pye weed	2" plug 1 quart pot 1 gallon pot	seasonal inundation and upland	< 0.5
Eutrochium purpureum sweet-scented joe-pye weed	2" plug 1 quart pot	irregular inundation and upland	< 0.5
Geranium maculatum wild geranium	1 quart pot	upland	< 0.5
Goodyera pubescens downy rattlesnake plantain	1 quart pot	upland	< 0.5
Helenium autumnale yellow sneezeweed	2" plug 1 quart pot	irregular to permanent inundation	< 0.5
Helianthus angustifolius swamp sunflower	2" plug 1 quart pot 1 gallon pot	irregular to permanent inundation	< 0.5
Hibiscus moscheutos marsh hibiscus	2" plug 1 quart pot 1 gallon pot	near MHW or regular inundation 0-3"	0 - 15
Iris versicolor blue flag iris	2" plug 1 quart pot 1 gallon pot	regular inundation 0-6"	< 0.5
Juncus effusus soft rush	2" plug 1 quart pot	MHW and above or irregular inundation	< 0.5
Juncus gerardii saltmeadow rush	2" plug	near MHW	0 - 32
Juncus roemerianus black needlerush	2" plug	near MHW	0 - 35

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Wetland Indicator Status	Light	Height Range	Rate of Spread	Comments
FACW	000	2 - 5'	slow	small, white flowers July-Oct; large clump forming plant; leaves prone to scorching if plants dry out; attracts pollinators
FACW	00	2 - 5'	slow	small, purple flowers in clusters July- Sept; nectar source for butterflies and beneficial insects
FAC	00	2 - 6.5'	slow	pale pinkish-purple flowers July-Oct; fragrant foliage; attracts songbirds and a variety of pollinators
FACU	00	1.5 - 2'	slow	pink/lavender flowers Apr-July; attracts bees and other beneficial insects; may become dormant in hot weather
UPL	•	8 - 16"	slow	evergreen orchid; small white flowers in spikes June-Aug; requires acidic soils and good winter drainage
FACW	00	1.5 - 6'	medium	vibrant yellow blooms July-Nov; attracts butterflies; best in moist to wet soils; good rain garden plant
FACW	0	1.5 - 5.5'	medium	showy yellow flowers late summer into fall, good for rain gardens; nectar attracts butterflies and songbirds (pH 4.0-7.0)
OBL	00	4 - 7'	slow	white/pink/red flowers in late summer; seed capsules through winter; nectar source for ruby-throated hummingbirds
OBL	00	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	00	3 - 4'	slow	clumping habit; often grows in tussocks or hummocks; food source for muskrats; shelter for birds
OBL	0	0.5 - 3'	slow	forms tight colonies; dark green foliage with slender round stems; found primarily in tidal brackish marshes; beneficial to waterfowl
OBL	0	1 - 4'	medium	flowers May-Oct; good marsh stabilizer; provides cover and nesting sites for marsh animals

Genus/Species Common Name	Available Sizes	Water Tolerance	Salinity Tolerance (ppt)
Kosteletzkya virginica seashore mallow	2" plug 1 quart pot 1 gallon pot	above MHW or irregular inundation	0 - 10
Liatris scariosa savanna blazing star	1 quart pot	upland	< 0.5
Liatris spicata blazing star	2" plug 1 quart pot	seasonal inundation and upland	< 0.5
Lobelia cardinalis cardinal flower	2" plug 1 quart pot	near MHW and upland	< 0.5
Lobelia siphilitica great blue lobelia	2" plug 1 quart pot	irregular inundation	< 0.5
<i>Mertensia virginica</i> Virginia bluebells	1 quart pot 1 gallon pot 2 gallon pot	irregular inundation	< 0.5
Mimulus ringens monkeyflower	2" plug 1 quart pot	seasonal to regular inundation	< 0.5
Monarda didyma scarlet beebalm	1 quart pot	seasonal to regular inundation	< 0.5
Monarda fistulosa wild bergamot	2" plug 1 quart pot	seasonal to regular inundation	< 0.5
Monarda punctata spotted beebalm	1 quart pot	seasonal to regular inundation	< 0.5
Muhlenbergia capillaris pink muhly	1 quart pot 1 gallon pot	irregular inundation	0 - 5
Onoclea sensibilis sensitive fern	1 gallon pot	irregular to permanent inundation	< 0.5

Wetland Indicator Status	Light	Height Range	Rate of Spread	Comments
NL	0	2 - 4'	slow	showy pink flowers July-Sept on tall plants; gray-green leaves; adaptable to heavy wet soils; attracts hummingbirds
UPL	00	2 - 4'	slow	reddish-purple thistle-like flowers Aug-Oct; forms clumps; tolerates heat and some shade; requires good drainage; attracts butterflies
FAC	00	1 - 6.5'	slow	bright purple spiked blooms July-Aug; clump forming; grass-like leaves; attracts songbirds and a variety of pollinators
FACW	00	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 in Aug-Oct; blooms in shade; needs abundant soil moisture; deer tolerant; attracts pollinators
FAC	•	1 - 2.5'	slow	blue-lavender bell-shaped flowers in early spring; foliage in upright clumps; plants go dormant in summer (pH 6.8-7.2)
OBL	00	1.5 - 4'	slow	light blue-violet to pink snapdragon-like flowers in summer; spreads easily; best in part shade; requires moist to wet soils
FAC	00	2 - 3'	slow	red flowers May-Oct; fragrant; attracts bees, hummingbirds and butterflies; deer and rabbit tolerant; requires moist soils
FACU	00	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
FACU	0	1 - 3'	slow	pale flowers with showy bracts Apr-Aug; fragrant foliage; somewhat drought tolerant; attracts pollinators; deer tolerant
FAC	00	3 - 4'	medium	dark green leaves; pink-purple flower spikes; heat, drought, poor soils tolerant; attracts beneficial insects (pH 5.5-6.8)
FACW	•	up to 3'	medium	needs consistent moisture; may spread in wet sites; highly sensitive to drought and first fall frost (pH 4.5-7.5)

Genus/Species Common Name	Available Sizes	Water Tolerance	Salinity Tolerance (ppt)
Osmunda regalis royal fern	1 gallon pot	irregular to permanent inundation	< 0.5
Osmundastrum cinnamomeum cinnamon fern	1 gallon pot	seasonal to regular inundation	< 0.5
Panicum amarum coastal panic grass	2" plug 1 quart pot	irregular inundation and upland	resistant
Panicum virgatum switchgrass	2" plug 1 quart pot	MHW to upland	0 - 10
Peltandra virginica arrow arum	2" plug 1 quart pot	permanent 1-18" inundation	0 - 1
Penstemon digitalis beardtongue	2" plug 1 quart pot 1 gallon pot	seasonal inundation to upland	< 0.5
Phlox divaricata wild blue phlox	1 quart pot	irregular inundation and upland	< 0.5
Phlox maculata meadow phlox	1 quart pot	seasonal to irregular inundation	< 0.5
Phlox paniculata fall phlox	1 quart pot	upland	< 0.5
Physostegia virginiana obedient plant	1 quart pot	irregular inundation and upland	< 0.5
Polemonium reptans Jacob's ladder	1 quart pot	upland	< 0.5
Pontederia cordata pickerelweed	2" plug 1 quart pot	permanent 1-12" inundation	< 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 (pH 4.0-6.0)
FACW	•	up to 6'	slow	typically 2-3' tall but with moist soils may be 6'; showy fiddleheads in spring; provides food for birds and mammals (pH 4.5-7.5)
FAC	0	1.5 - 6'	rapid	deep-rooted clumping grass; grows best on coastal shores and dunes; tolerates drought; provides food and cover for wildlife
FAC	00	2 - 4'	slow	clumping grass; delicate texture; ornamental particularly in winter; very high wildlife value; flowers July-Sept
OBL	0	2 - 3'	slow	attractive, statuesque accent; inconspicuous green flower in late spring; seed preferred by wood ducks
FAC	00	2 - 4'	medium	white to pinkish flowers spring to early summer; leaves reddish purple in cooler temps; ornamental value in meadows; attracts pollinators
FACU	•	1.5'	rapid	blue-lavender flowers Apr-June; aromatic; attracts butterflies; evergreen; tolerates deer, drought, clay soils
FAC	000	1 - 3'	medium	glossy green leaves; pink to purple flowers May-Sept; nectar source for butterflies, moths and hummingbirds
FACU	0	3-6'	slow	pink/lavender flowers July-Sept; best in moist soils; not drought tolerant; attracts hummingbirds
FACW	00	3 - 6'	rapid	white to whitish pink/purple flowers June- Sept; may spread rapidly in moist soils; beneficial to bumblebees
FAC	•	0.5 - 1.5'	slow	light blue bell-shaped flowers late spring to summer; best in partial shade; nectar source for bees, butterflies and moths
OBL	00	1 - 3.5'	medium	heart-shaped leaves; showy blue flowers in spikes June-Nov; of some interest to black and wood ducks

Genus/Species Common Name	Available Sizes	Water Tolerance	Salinity Tolerance (ppt)
Pteridium aquilinum eagle fern	1 gallon pot	upland	< 0.5
Pycnanthemum muticum mountain mint	2" plug 1 quart pot	seasonal inundation to upland	< 0.5
Pycnanthemum virginianum Virginia mountain mint	2" plug 1 quart pot	seasonal inundation to upland	< 0.5
Rhexia mariana Maryland meadow beauty	2" plug 1 quart pot 1 gallon pot	seasonal to irregular inundation	< 0.5
Rudbeckia fulgida orange coneflower	2" plug 1 quart pot 1 gallon pot	irregular inundation and upland	< 0.5
Sagittaria latifolia duck potato	2" plug	permanent inundation 0-18"	< 0.5
Saururus cernuus lizard's tail	2" plug 1 quart pot	permanent inundation 0-12"	< 0.5
Schizachyrium scoparium little bluestem	2" plug 1 quart pot	MHW to upland	< 0.5
Scirpus cyperinus woolgrass bulrush	2" plug	seasonal inundation	< 0.5
Schoenoplectus pungens three-square bulrush	2" plug 1 quart pot	permanent inundation 0-12"	0 - 15
Schoenoplectus robustus sturdy or saltmarsh bulrush	1 quart pot	near MHW	0 - 30
Schoenoplectus tabernaemontani softstem bulrush	2" plug 1 quart pot	permanent inundation 0-12"	0 - 5

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Wetland Indicator Status	Light	Height Range	Rate of Spread	Comments
FACU	0	3 - 4'	rapid	fronds broadly triangular; prefers acidic soils; will form colonies in disturbed areas; drought tolerant (pH < 6.0)
FAC	00	1 - 3'	rapid	pink flowers with silvery-leaf like bracts July-Sept; aromatic foliage; beneficial for pollinators; tolerates clay soils
FAC	0	2 - 4'	rapid	clusters of tiny white flowers July-Sept; blooms best in well-drained soil in full sun; aromatic foliage; beneficial to pollinators
FACW	00	1 - 3'	medium	pale pink flowers with showy yellow anthers June-Oct; attracts pollinators; urn-shaped seed capsule
FAC	00	1.5 - 3.5'	medium	yellow-orange blooms (dark brown center) July-Oct; attracts songbirds and a variety of pollinators
OBL	0	up to 4'	rapid	arrow shaped leaves; white flowers on stalk July-Sept; underground tuber preferred by at least 15 species of ducks
OBL	00	up to 4'	rapid	attractive, nodding white flowers in spikes June-Sept; valued by wood ducks; colonizes large areas; drought resistant
FACU	0	2 - 3'	slow	clumping grass with delicate texture; bronze/tan fall color; low maintenance; tolerates high heat; beneficial to wildlife
OBL	0	4 - 5'	medium	forms dense clumps; nodding, persistent seed clusters; flowers Aug-Sept; high wildlife value
OBL	0	up to 4'	rapid	erect, triangular stems; heavy predation by muskrat, nutria, geese; birds eat seeds; flowers June-Sept
OBL	0	up to 4'	rapid	triangular stems; moderate wildlife value; does well in fluctuating salinity; flowers July-Oct
OBL	0	6 - 10'	rapid	tube-like stems; drooping seed clusters at top; good vertical accent; moderate wildlife value; flowers June-Sept

Genus/Species Common Name	Available Sizes	Water Tolerance	Salinity Tolerance (ppt)
Scutellaria incana hoary skullcap	1 quart pot	upland	< 0.5
Sisyrinchium angustifolium blue-eyed grass	1 quart pot	irregular inundation and upland	< 0.5
Solidago rugosa rough-stem goldenrod	2" plug 1 quart pot	irregular inundation and upland	< 0.5
Solidago sempervirens seaside goldenrod	2" plug 1 quart pot	irregular inundation	0 - 10
Spartina alterniflora / Sporobolus alterniflorus smooth cordgrass	2" plug 1 quart pot	mid-tide to MHW	0 - 35
Spartina patens / Sporobolus pumilus salt meadow hay	2" plug 1 quart pot	above MHW	0 - 35
Symphyotrichum cordifolium blue wood aster	1 quart pot	upland	0 - 5
Symphyotrichum novae-angliae New England aster	2" plug 1 quart pot 1 gallon pot	irregular inundation and upland	0 - 5
Symphyotrichum novi-belgii New York aster	2" plug 1 quart pot 1 gallon pot	irregular inundation and upland	< 0.5
Thelypteris noveboracensis New York fern	1 gallon pot	seasonal to irregular inundation	< 0.5
Trillium grandiflorum great white trillium	1 quart pot	upland	< 0.5
Vernonia noveboracensis New York Ironweed	2" plug 1 quart pot	seasonal inundation	< 0.5

Wetland Indicator Status	Light	Height Range	Rate of Spread	Comments
NL	000	1.5 - 3.5'	medium	blue-violet flower spikes June-Sept; attracts hummingbirds and other pollinators; deer and rabbit resistant; drought-tolerant once established
FACW	00	4 - 10"	slow	violet-blue flowers May-July; grass-like foliage (in iris family); prefers consistently moist but well-drained soils
FAC	0	2 - 4'	medium	light yellow flowers Sept-Oct; hairy stems and deep veins in leaves; nectar and pollen source for late season pollinators
FACW	00	3 - 4'	slow	yellow flowers one-sided spikes July- Nov; grows in sand, dunes, salt marshes, pinelands; salt tolerant; deer resistant
OBL	0	4 - 7'	rapid	tidal salt marsh grass; useful in shore erosion control and stabilization; rhizomes eaten by muskrat and geese
FACW	0	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
NL	•	2 - 3'	medium	small blue flowers with yellow centers Sept- Nov; tolerant of drought and clay soils; attracts butterflies and pollinators
FACW	00	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	00	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	00	1 - 2.5'	rapid	will form large colonies; adaptable to wet and dry woodland sites; provides shelter for toads (pH < 6.8)
NL	•	0.5 - 1.5'	medium	waxy white flowers fade to pink Apr-June; woodland wildflower that grows in moist but well-drained soils high in organic matter; dormant in summer (pH < 6.8)
FACW	0	3 - 7'	slow	vivid purple flowers in heads Aug-Sept; tall narrow plant; flowers attract butterflies; seed heads attract birds (pH < 6.8)

Email: nursery-sales@wetland.org

Genus/Species Common Name	Available Sizes	Water Tolerance	Salinity Tolerance (ppt)
Woodwardia areolata netted chain fern	1 gallon pot	seasonal to regular inundation	< 0.5
Zizia aptera meadow zizia	1 quart pot	upland	< 0.5
Zizia aurea golden Alexander	1 quart pot	upland	< 0.5



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Wetland Indicator Status	Light	Height Range	Rate of Spread	Comments
OBL	•	1 - 3'	rapid	good ground cover; tolerates heavy shade and brackish soils; chain-like pattern in fertile fronds; cover for frogs, toads, and newts
FAC	000	1 - 3'	medium	yellow umbel flowers Apr-June; basal leaves, divided leaves on stem; attracts pollinators; host for Black Swallowtail butterflies (pH 6.0 to 8.0)
FAC	000	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)
Aronia arbutifolia red chokeberry	1 gallon 2 gallon 3 gallon	irregular to seasonal inundation	resistant
Aronia melanocarpa black chokeberry	1 gallon 2 gallon 3 gallon	irregular to seasonal inundation	resistant
Asimina triloba paw-paw	1 gallon 2 gallon 3 gallon	irregular to seasonal inundation	< 0.5
Baccharis halimifolia groundsel tree	1 gallon 2 gallon 3 gallon	above MHW or seasonal inundation	0 - 15
Betula nigra river birch	1 gallon 2 gallon 3 gallon	seasonal inundation	< 0.5
Callicarpa americana beautyberry	1 gallon 2 gallon 3 gallon	irregular inundation	< 0.5
Ceanothus americanus New Jersey tea	1 gallon 2 gallon 3 gallon	upland	< 0.5
Cephalanthus occidentalis buttonbush	1 gallon 2 gallon 3 gallon	MHW and above or permanent inundation 0-12"	resistant
Cercis canadensis eastern redbud	1 gallon 2 gallon 3 gallon	irregular inundation	< 0.5

Wetland Indicator Status	Light	Height	Spread	Comments
FACW	00	6 - 12'	3 - 6'	white flowers in May; red fruit Sept-Dec; emergency winter food for many species; tolerates acidic soils (pH 5.0-6.5)
FAC	0	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	0	20 - 35'	20 - 35'	reddish-brown flowers in Apr-June; edible fruit Aug-Sept; host for zebra swallowtail; tolerates frost and deer
FAC	0	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	0	50 - 75'	35 - 50'	deciduous; attractive bark and yellow fall foliage; used in forested riparian buffers and erosion control (pH 4.0-6.5)
FACU	0	3 - 6'	3 - 6'	fast growing understory shrub; lavender to purple showy berries in fall; yellow fall foliage; tolerant of light shade and clay soils; attracts songbirds (pH 4.8-7.0)
NL	0	3'	3 - 5'	densely branched; fragrant white flowers May-Sept; gray-green leaves; nitrogen fixer; requires good drainage; drought tolerant; benefits pollinators (pH 4.3-6.5)
OBL	000	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)
UPL	•	20 - 35'	20 - 35'	pink flowers Apr-May; nitrogen fixer; golden-yellow fall color; valuable to pollinators, birds, and small mammals (pH 4.5-7.5)

SHRUBS/TREES

Genus/Species Common Name	Available Sizes	Water Tolerance	Salinity Tolerance (ppt)
Clethra alnifolia sweet pepperbush	1 gallon 2 gallon 3 gallon	seasonal to regular inundation	resistant
Cornus amomum silky dogwood	1 gallon 2 gallon 3 gallon	seasonal inundation	< 0.5
Cornus florida flowering dogwood	1 gallon 2 gallon 3 gallon	upland	< 0.5
Cornus racemosa gray twig dogwood	1 gallon 2 gallon 3 gallon	seasonal inundation	< 0.5
Cornus sericea redosier dogwood	1 gallon 2 gallon 3 gallon	seasonal inundation	< 0.5
Diospyros virginiana persimmon	1 gallon 2 gallon 3 gallon	irregular inundation	< 0.5
Euonymus americanus strawberry bush	1 gallon 2 gallon 3 gallon	irregular inundation	< 0.5
Hamamelis virginiana American witch hazel	1 gallon 2 gallon 3 gallon	upland	< 0.5
<i>Ilex glabra</i> inkberry	1 gallon 2 gallon 3 gallon	seasonal inundation	< 0.5

Wetland Indicator Status	Light	Height	Spread	Comments
FACW	•	6 - 12'	3 - 6'	fragrant white flowers in spikes July-Aug; prefers shade and moist soils; attracts butterflies and bees; tolerates acidic soils (pH 4.5-6.5)
FACW	0	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
FACU	•	20 - 50'	20 - 50'	small deciduous tree; showy blooms with white bracts Apr-May; fall leaf color scarlet red; orange/red berries Sept-Dec benefit to migrating birds (pH 5-7)
FAC	000	6 - 12'	6 - 12'	white flowers May-June; white berries Aug-Sept, very high food value to songbirds, waterfowl, mammals
NL	0	6 - 12'	6 - 12'	white flowers May-June; white berries in Sept; very high food value to songbirds, waterfowl, game birds, and mammals
FAC	00	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 bark; forms a deep tap root (pH 5-7)
FAC	•	4 - 6'	4 - 6'	deciduous understory shrub; bright green shoots year round; shiny red-orange berries; fall leaf color yellow-dark pink; prefers shady moist locations
FACU	00	15 -25'	15 - 20'	fragrant showy yellow flowers in fall Sept- Dec; yellow fall foliage; salt-tolerant; will tolerate heavy clay soil if moist; used by song birds and mammals (pH 5.5-6.5)
FACW	00	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)

SHRUBS/TREES

Genus/Species Common Name	Available Sizes	Water Tolerance	Salinity Tolerance (ppt)
Ilex verticillata winterberry	1 gallon 2 gallon 3 gallon	above MHW or seasonal inundation	< 0.5
Itea virginica Virginia sweetspire	1 gallon 2 gallon 3 gallon	regular to seasonal inundation	< 0.5
Iva frutescens high tide bush	1 gallon 2 gallon 3 gallon	above MHW to upland	0 - 15
Lindera benzoin spicebush	1 gallon 2 gallon 3 gallon	seasonal inundation	resistant
Magnolia virginiana sweetbay magnolia	1 gallon 2 gallon 3 gallon	seasonal to regular inundation 0-3"	resistant
Morella cerifera wax myrtle	1 gallon 2 gallon 3 gallon	above MHW or irregular inundation	0 - 10
Morella pensylvanica northern bayberry	1 gallon 2 gallon 3 gallon	above MHW or irregular inundation	0 - 20
Platanus occidentalis American sycamore	1 gallon 2 gallon 3 gallon	irregular to seasonal inundation	< 0.5
Prunus maritima beach plum	1 gallon 2 gallon 3 gallon	upland	resistant
Quercus bicolor swamp white oak	1 gallon 2 gallon 3 gallon	seasonal inundation	< 0.5

Wetland Indicator Status	Light	Height	Spread	Comments
FACW	000	6 - 12'	6 - 12'	flowers in June; red-orange berries Aug- Feb (only on female plants, male pollinator necessary); emergency winter food for many songbirds (pH 4.5-6.5)
FACW	000	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	0	2 - 10'	6 - 12'	flowers Aug-Sept; attracts birds; similar to Baccharis halimifolia but with opposite leaves (pH 5-5.7)
FACW	•	6 - 12'	6 - 12'	fragrant foliage; scarlet berries in Sep; very high food value for birds; deer browse twigs and foliage; tolerates acidic soils (pH 4.5-6.5)
FACW	000	12 - 20'	12 - 20'	semi-evergreen; fragrant, white 2-3" flowers May-June; shiny green leaves, flowers best full shade to partial sun; tolerates wet, boggy sites
FAC	00	6 - 15'	6 - 15'	evergreen/semi-evergreen; nitrogen fixer; fragrant; bluish berries Sept-April; at least one male plant needed for pollination/fruit set; attracts birds pH 6.8-7.2)
FAC	00	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	00	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	0	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	00	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)

SHRUBS/TREES

Genus/Species Common Name	Available Sizes	Water Tolerance	Salinity Tolerance (ppt)
Quercus palustris pin oak	1 gallon 2 gallon 3 gallon	seasonal inundation	< 0.5
Quercus phellos willow oak	1 gallon 2 gallon 3 gallon	seasonal inundation	< 0.5
Rosa palustris swamp rose	1 gallon 2 gallon 3 gallon	regular inundation 0-3"	< 0.5
Sambucus nigra ssp. canadensis elderberry	1 gallon 2 gallon 3 gallon	seasonal inundation	< 0.5
Taxodium distichum bald cypress	1 gallon 2 gallon 3 gallon	regular inundation	< 0.5
Vaccinium corymbosum highbush blueberry	1 gallon 2 gallon 3 gallon	seasonal inundation	resistant
Viburnum dentatum arrowwood	1 gallon 2 gallon 3 gallon	seasonal inundation	resistant
Viburnum nudum possum-haw viburnum	1 gallon 2 gallon 3 gallon	seasonal or regular inundation	< 0.5
Viburnum prunifolium black haw viburnum	1 gallon 2 gallon 3 gallon	irregular inundation	< 0.5

Wetland Indicator Status	Light	Height	Spread	Comments
FACW	0	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
FACW	00	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
OBL	0	2 - 7'	4 - 6'	pink flowers June-Oct; rose hips eaten by many species of birds; thorny; good nesting habitat (pH 4-7)
FACW	000	6 - 12'	6 - 12'	sends out suckers; small, white flowers in large flat-topped clusters; purple berries Aug-Sept; relished by birds
OBL	0	50 - 100'	20 - 30'	deciduous conifer; gray-green feathery needles turn coppery-red in fall; will grow as an aquatic tree with buttress trunks and cypress knees forming above the water line (pH 4.5-6)
FACW	000	12'	4 - 6'	white, urn-shaped flowers Apr-July; blue berries are a valuable food source for many species of wildlife; demands acidic soils (pH 3.5-6.0)
FAC	0	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	000	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	000	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 Spartina patens Panicum amarum Panicum virgatum

Flowering

Hibiscus moscheutos Kosteletzkya virginicia Solidago sempervirens

Water Depth At MHW

Grasses/Grass-like

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

Flowering

Hibiscus moscheutos Kosteletzkya virginicia Solidago sempervirens

Water Depth Below MHW

Grasses/Grass-like

Spartina alterniflora



WETLAND CHARACTERISTICS

Freshwater Full Sun

Water Depth/ Flooding Frequency Seasonal Inundation

Grasses/Grass-like

Carex crinita Chasmanthium latifolium
Carex lurida Panicum amarum
Carex vulpinoidea Panicum virgatum

<u>Flowering</u>

Asclepias incarnata Mimulus ringens Boltonia asteroides Monarda didyma Chelone glabra Monarda fistulosa Monarda punctata Conoclinium coelestinum Eutrochium dubium Penstemon digitalis Phlox maculata Eutrochium purpureum Helenium autumnale Pycnanthemum muticum Helianthus angustifolius Pycnanthemum virginianum Hibiscus moscheutos Rhexia mariana Kosteletzkya virginica Rudbeckia fulgida Liatris spicata Scirpus cyperinus Lobelia cardinalis Solidago sempervirens Lobelia siphilitica Vernonia noveboracensis

<u>Ferns</u>

Onoclea sensibilis Woodwardia areolata



WETLAND CHARACTERISTICS

Freshwater Full Sun

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

Grasses/Grass-like

Andropogon virginicus Carex crinita Carex Iurida Schizachyrium scoparium Chasmanthium latifolium

Flowering

Agastache foeniculum Aquilegia canadensis Asclepias incarnata Asclepias tuberosa Baptisa tinctoria Baptisia australis Boltonia asteroides Chelone glabra Conoclinium coelestinum Eutrochium dubium Eutrochium purpureum Eupatorium perfoliatum Helenium autumnale Helianthus angustifolius Hibiscus moscheutos Kosteletzkya virginica Liatris spicata Lobelia cardinalis

Lobelia siphilitica Mimulus ringens Monarda didyma Monarda fistulosa Monarda punctata Penstemon digitalis Phlox divaricata Phlox maculata Physostegia virginiana Pycnanthemum muticum Pycnanthemum virginianum Rhexia mariana Rudbeckia fulgida Sisyrinchium angustifolium Solidago rugosa Solidago sempervirens Symphyotrichum novae-angliae Vernonia noveboracensis

Panicum amarum

Panicum virgatum

Scirpus cyperinus

Ferns

Onoclea sensibilis





WETLAND CHARACTERISTICS

Freshwater Full Sun

Water Depth/Flooding Frequency 0-3" Permanent

Water Depth/Flooding Frequency 3-6" Permanent

Water Depth/Flooding Frequency 6-12" Permanent

Greater than 6" planting depth-

suggest quarts, not plugs

Grasses/Grass-like

Acorus americanus Carex stricta Carex vulpinoidea Juncus effusus Scirpus pungens Schoenoplectus tabernaemontani

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

Grasses/Grass-like

Acorus americanus Carex stricta Carex vulpinoidea Scirpus pungens

Schoenoplectus tabernaemontani

Grasses/Grass-like

Acorus americanus Carex stricta Schoenoplectus tabernaemontani

Flowering Alisma subcordatum

Chelone glabra Helenium autumnale Helianthus angustifolius Hibiscus moscheutos Iris veriscolor Lobelia cardinalis Lobelia siphilitica Mimulus ringens Peltandra virginica Pontederia cordata Sagittaria latifolia Saururus cernuus

Flowering

Alisma subcordaum Helenium autumnale Hibiscus moscheutos Iris versicolor Peltandra virginica Pontederia cordata

Saururus cernuus

Ferns

Osmundastrum cinnamomeum Osmunda regalis

Flowering

Alisma subcordatum Peltandra virginica Pontederia cordata Sagittaria latifolia Saururus cernuus

Ferns

Onoclea sensibilis Osmundastrum cinnamomeum Osmunda regalis Woodwardia aeolata

Freshwater Shade

Grasses/Grass-like

Carex crinta Carex stricta

Flowering

Chelone glabra Conoclinium coelestinum Helenium autumnale Lobelia cardinalis Lobelia siphilitica Peltandra virginica Phlox divaricata Phlox maculata

Ferns

Osmundastrum cinnamomeum Osmunda regalis Onoclea sensibilis



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