### Pennsylvania Stormwater Best Management Practices Manual

**DRAFT - JANUARY 2005** 

### Appendix B - Pennsylvania Native Plant List

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# Appendix B - Pennsylvania Native Plant List

information helpful for designing a planting plan for a successful BMP for use in BMPs. The BMP Plant List contains information about plant species native to Pennsylvania that are suitable The list is sorted by plant type and then by scientific name. The table also contains

### Plant Type

Herbaceous plants are broken down into the following categories; ferns, grasses, grass-like plants, and forbs. Woody plants are broken down into the following categories; shrubs, trees, and trees tree is impractical or an aesthetic impact needs to be made. (small). Small trees are understory and ornamental trees. These trees are useful when a canopy

## Wetland Indicator Status

indicator symbol shows that the species is less often found in wetlands than other species with the same indicator symbol. found in wetlands than other species with the same indicator symbol. plant will be found in a wetland. A "+" after the indicator symbol shows that the species is more often (Region 1) compiled by the U.S. Fish and Wildlife Service. This list indicates the likelihood that a The wetland indicator status is from the National List of Plant Species that Occur in Wetlands: Northeast Conversely, a "-" after the

this plant list. frequency of inundation, the "Hydrologic Zone" and "Inundation Tolerance" fields are also included in Since wetland indicator status is very generalized and does not contain information about depth or

### Hydrologic Zone

Zone 1: Open Water: Permanent Pool (12 inches to 6 feet)

upstream or on wildlife. If submerged plant material becomes more commercially available and clogging concerns are addressed, this area can be planted. The function of planting deep water duckweed (Lemna minor), will naturally colonize open water via transport of plant fragments from submergent plants, if at all. This deep water zone is not routinely planted for several reasons. There areas is to absorb nutrients in the water column, enhance sediment deposition, improve oxidation water aquatic plants can clog the stormwater facility outlet structure. In many cases, plants such as commercially available; open water areas, free of vegetation, provide unique habitat; and, deep are a limited number of plant species that typically survive and grow in this zone, and many are not Open water and permanent pools range from 12 inches to 6 feet in depth and are best colonized by and create additional aquatic habitat.

Select native plants that can:

- withstand constant inundation of water of 1 foot or greater in depth;
- withstand being submerged partially or entirely;
- enhance pollutant uptake; and
- provide food and cover for waterfowl, fish, amphibians, desirable insects, and other aquatic

odorata), wild celery (Vallisneria americana), sago pondweed (Potamogeton pectinatus), and redhead Suggested emergent or submergent species include, but are not limited to: water lily (Nymphaea grass (Potamogeton perfoliatus).

# Zone 2: Shallow Water Terrace / Aquatic Bench (6 inches to 1 foot)

will spread to colonize slightly deeper water. Many species available for planting in this zone also which species adapt most readily. Some species will migrate upslope into saturated soils and others will dominate portions of the site and some species may be eliminated. Local conditions will determine plants are typically planted in groups or clusters of like species. As this zone matures, some species eliminating the need for insecticide applications. In order to create a naturalistic setting, emergent important habitat for many aquatic animals, which will naturally regulate mosquito populations developed on shallow water shelves constructed within the pond. When planted, Zone 2 provides of wide variety of emergent wetland species. These areas will typically fringe the pond or can be with the aquatic bench or shelf found in many BMP's. This zone offers ideal conditions for the growth include aesthetic qualities. Zone 2 includes all areas that are inundated by the normal pool to a depth of 1 foot. Zone 2 coincides

Select native plants that can:

- withstand constant inundation of water to depths between six inches and 1 foot deep;
- be partially submerged;
- enhance pollutant uptake and transformation; and
- provide food and cover for waterfowl, desirable insects, and other aquatic life

engineered contours of the pond and conceal drawdowns during dry weather. absorb wave energy, and reduce erosion when the water level fluctuates. Plants can also soften the Emergent herbaceous plants will stabilize the bottom and edge of the pond, slow water velocities,

effusus), arrow arum (*Peltandra virginica*), smartweeds (*Polygonum spp.*), pickerelweed (*Pontederia cordata*), duck potato (*Saggitaria latifolia*), lizard tail (*Saururus cernuus*), soft stem bulrush (*Scirpus* square (Scirpus pungens), managrasses (Glyceria spp.), blue flag iris (Iris versicolor), soft rush (Juncus Appropriate herbaceous species include: water plantain (Alisma plantago-aquatica), common three americanum). There are few trees or shrubs that will become established or survive within Zone 2 tabernaemontanii), and giant bur-reed (Sparganium eurycarpum) and American bur-reed (Sparganium

# Zone 3: BMP Fringe: Low Marsh (0-6" regular inundation)

drought during the growing season. Zone 3 should be heavily planted to ensure vigorous cover to most difficult to establish since plants must be able to withstand periods of inundation as well as interface between the emergent wetland plantings and the adjacent upland. This zone can be the by the design slope. This zone will be permanently inundated by the design elevation of any control protect the shoreline. This zone provides opportunities for a number of herbaceous plants, shrubs Zone 3 encompasses the waterward shoreline of a pond or wetland and its width will be determined However, this zone is likely to dry down during periods of drought. This zone provides the

Select native plants that can:

- stabilize the shoreline to minimize erosion caused by wave and wind action or water fluctuation;
- withstand regular inundation of water, as plants will be partially submerged at times;
- provide shade along the southern exposure to help reduce temperature of open waters;
- enhance pollutant uptake;
- and located to control overpopulation of waterfowl); provide food and cover for waterfowl, songbirds, and wildlife (large plants can be selected

- access; be located to reduce human access to potential hazards without blocking maintenance
- reach;and, have little or no maintenance requirements because they may be difficult or impossible to
- chemical application is not advised in stormwater ponds be resistant to disease and other problems that require chemical applications, since

river birch, red maple (Acer rubrum), silver maple (Acer saccharinum), river birch (Betula nigra), green ash (Fraxinus pennsylvanica), sweetgum (Liquidambar styraciflua), sweet bay magnolia oak (Quercus phellos), swamp white oak (Quercus bicolor), pin oak (Quercus palustris) and black alnifolia), winterberry (Ilex verticillata), inkberry holly (Ilex glabra), serviceberry (Amelanchier spp.), racemosa), arrowood (Viburnum dentatum), spicebush (Lindera Benzoin), sweet pepperbush (Clethra corymbosum), red osier/silky dogwood (Cornus stolonifera/amomum), gray dogwood (Cornus rose (Rosa palustris), buttonbush (Cephalanthus occidentalis), highbush blueberry (Vaccinium species are suggested: smooth or speckled alder (Alnus spp.), pussy willow (Salix discolor), swamp and spike rushes (Eleocharis spp.). If shading is needed along the shoreline, the following woody flag (Acorus calamus), swamp milkweed (Asclepsis incarnata), redtop (Agrostis spp.), switchgrass willow (Salix nigra). (Magnolia virginiana), black gum (Nyssa sylvatica), American sycamore (Platanus occidentalis) willow (Panicum virgatum), Canada bluejoint (Calamagrostis canadensis), many bulrushes (Scirpus spp.), Some other herbaceous species that do well in Zone 3 include: blue flag iris (Iris versicolor), sweet

# Zone 4: BMP Fringe: High Marsh (periodic inundation, saturated soils)

include the majority of the temporary extended detention area. The soil substrate will be periodically Zone 4 extends upslope from Zone 3 and encompasses the area that may be subject to periodic inundation after storms. The width of this zone will depend on the design slope. This zone will

Select native plants that can:

- warm summer months; withstand periodic inundation of water after storms, as well as significant drought during the
- stabilize the ground from erosion caused by run-off;
- provide shade along the southern exposure to help reduce temperature of open waters
- enhance pollutant uptake;
- be very low maintenance, as they may be difficult or impossible to access;
- and located to control overpopulation of waterfowl); and provide food and cover for waterfowl, songbirds, and wildlife (plants may also be selected
- be located to reduce pedestrian access to the deeper pools

Native plants are preferred because they are low-maintenance and disease-resistant

beebalm (Monarda didyma), bergamot (Monarda fistulosa), ironweed (Vernonia noveboracensis), river birch (Betula nigra), sweetgum (Liquidambar styraciflua), Ironwood (Carpinus caroliniana), eastern alnifolia), bayberry (Myrica pensylvanica), elderberry (Sambucus canadensis), serviceberry (Asclepias incarnata), switchgrass (Panicum virgatum), shrub dogwoods (Cornus spp.), swamp rose (Rosa palustris), inkberry (Ilex glabra), arrowwood (Viburnum dentatum), sweet pepperbush (Clethra blue vervain (Verbena hastata), spotted and purple Joe-pye weed (Eupatorium spp.), swamp milkweed Frequently used plant species in Zone 4 include: asters (Aster spp.) and goldenrods (Solidago spp.), (Amelanchier arborea), sweetbay magnolia (Magnolia virginiana), green ash (Fraxinus pennsylvanica),

red cedar (Juniperus virginiana), and red maple (Acer rubrum).

# Zone 5: Floodplain Terrace (infrequent inundation, temporarily saturated soils)

maintenance natural vegetation. objectives for Zone 5 are to stabilize the slopes characteristic of this zone and establish low Zone 5 is infrequently inundated by floodwaters that quickly recede in a day or less. Key landscaping

### Select plants that can:

- withstand infrequent but brief inundation during storms and, between storms, typical conditions during the dry weather period; moisture conditions that may be moist, slightly wet, or even swinging entirely to drought
- stabilize the basin slopes from erosion;
- maintenance and discourage resident geese); and slopes or mowing frequency may be limited (a dense tree cover may help reduce be very low maintenance as ground cover since they may be difficult to access on steep
- provide food and cover for waterfowl, songbirds, and wildlife

Placement of plant material in Zone 5 is often critical.

Some commonly planted species in Zone 5 include:

willow oak (Quercus phellos), hickories (Carya spp.), eastern red cedar (Juniperus virginiana), such as switchgrass (Panicum virgatum), Indian grass (Sorghastrum nutans), and little bluestem black eyed Susan (Rudbeckia hirta), purple coneflower (Echinacea purpurea), warm season grasses hackberry (Celtis occidentalis) and witch-hazel (Hamamelis virginiana). (Carpinus caroliniana), cherries (Prunus spp.), red oak (Quercus rubra), scarlet oak (Quercus coccinea), (Schizacyrium scoparium), many viburnums (Viburnum spp.), Virginia rose (Rosa virginiana), Ironwood

## Zone 6: Upland (never inundated)

materials. Particular attention should be paid to seasonal color and texture of these plantings screen undesirable views, serve as a buffer, or provide shade to allow a greater variety of plant require infrequent mowing to reduce the cost of maintaining this landscape. function within the landscape because little or no water inundation will occur. Ground covers should buffer of a pond or wetland. Plant selections should be made based on soil condition, light, and Zone 6 is important since they are often used to create a visual focal point, frame a desirable view, This zone extends above the maximum design water surface elevation and often includes the outermost Placement of plants in

Some frequently used plant species in Zone 6 include:

herbaceous layer should be seeded or planted with a mix of warm season grasses and wildflowers ornamental trees such as Flowering dogwood (Cornus florida) and redbud (Cercis canadensis). Large growing trees such as basswood (*Tilia americana*), white oak (*Quercus alba*), scarlet oak (*Quercus coccinea*), Black oak (*Quercus velutina*), American beech (*Fagus grandifolia*), white ash (*Fraxinus americana*), Tulip poplar (*Liriodendron tulipifera*) and white pine (*Pinus strobus*); and small

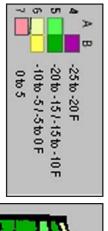
### Inundation Tolerance

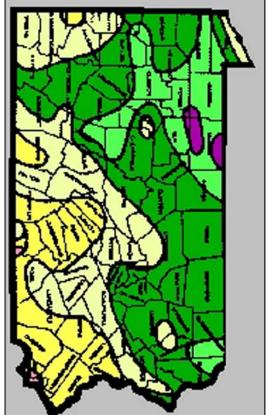
plants that survive inundation and saturated soils, typically during greater than 50% of the growing standing water during the growing season. These are typically upland plants. "Saturated" indicates can tolerate during the growing season. A "no" indicates plants that do not survive saturated soils or Inundation Tolerance gives information about frequency and depth of inundation that plant species

requirements of plants in a general list such as this. As such, we suggest that further research be tolerated by aquatic plants are provided where available. It is difficult to give the exact hydrologic soils, typically during less than 50% of the growing season. performed to confirm the requirements of particular species. "Seasonal" indicates that the plant is able to withstand occasional inundation and saturated Available information on water depths

### Hardiness Zone

area of zone four (4) located in the northwestern part of the state and a small area of zone seven (7) located in the southeast. The map is available on line through the USDA. Plant Hardiness Zone Map". Ideal hardiness zone ranges are given for the plants. Hardzone/index.html Pennsylvania is mainly in zones five (5) and six (6). There is a small These zone numbers correspond to the "USDA http://www.usna.usda.gov/





USDA Hardiness Zones for Pennsylvania

### **Commercial Availability**

important to plan ahead and locate plant materials in advance of planting. Plant materials should be substitutions in the case that some species are unavailable located at least six (6) months in advance of planting. Care was taken to develop a list of plants that would be both successful and obtainable. This gives enough time to locate approved

### Wildlife Value

distributes seed, and enhances the ecological value of the wetland. fencing is provided. Canada goose and muskrat can be problematic and will destroy new plantings unless exclusion Attracting beneficial wildlife increases the function and value of a BMP. Wildlife pollinates plants, Note that some wildlife, such as

### Notes

This column contains helpful details about the plant species.

### **BMP PLANT LIST**

Common Name	Scientific Name	Plant Type	Wetland Indicator	Hydrologic Zone	Inundation Tolerance	Hardiness Zone	Commercial Availability	Wildlife Value	Notes
Fern, hay-scented	Dennstaedtia punctilobula	Fern	NI	4,5,6	No	4-8	Plants	Tolerate Deer Browsing.	Shade to partial sun.
Fern, marginal shield	Dryopteris marginalis	Fern	FACU-	4,5,6	No	5-8	Plants		Partial sun. Shade tolerant. Evergreen.
Fern, sensitive	Onoclea sensibilis	Fern	FACW	[3,4],5	Saturated	4-9	Plants	Moderate. Songbirds and small mammals	Full to partial sun. Shade tolerant
Fern, cinnamon	Osmunda cinnamomea	Fern	FACW	2,[3,4]	Saturated	4-8	Plants	Moderate. Songbirds and small mammals	Full to partial sun. Shade tolerant. Young "fiddle heads"
Fern, royal	Osmunda regalis	Fern	OBL	2,[3,4]	Saturated	4-9	Plants	Moderate. Small mammals.	Full to partial sun, Shade
Fern, New York	Thelypteris noveboracensis	Fern	FAC	[3,4],5	Saturated	2-8	Plants	Moderate. Songbirds and small mammals.	Partial sun. Shade tolerant.  Drought tolerant.
Sweetflag	Acorus americanus	Forb	OBL	3,4	Seasonal		Plants, Rhizomes	Low food. Good cover.	Tolerant of dry periods. Not a rapid colonizer. Tolerates acidic conditions.
Plantain, water	Alisma plantago-aquatica (subcordatum)	Forb	OBL			3-7			
Columbine, wild	Aquilegia canadensis	Forb	FAC	[4,5],6	No	3-8	Plants, Seed	Moderate. Butterflies, hummingbirds, and beneficial insects.	Full sun to full shade. Spreads by seed. Early spring flowers.
Milkweed, swamp	Asclepias incarnata	Forb	OBL	2,[3,4]	Saturated, 0-6"	3-8	Plants, Seed	Moderate. Butterflies, small mammals, and beneficial insects.	Full to partial sun. Drought tolerant. Not eaten by wildlife.  Attractive flowers.
Milkweed, common	Asclepias syriaca	Forb	NI	5,6	No	4-9	Plants, Seed	High. Food for butterflies (esp. Monarch) and beneficial insects.	Full sun. Drought tolerant.
Butterflyweed	Asclepias tuberosa	Forb	NI	5,6	No	4-10	Plants, Seed	Moderate. Butterflies and beneficial insects.	Full to partial sun. Attractive orange flower.
Aster, white wood	Aster divercatus	Forb	NI	4,[5,6]	No	4-8	Plants	Low. Butterflies and beneficial insects.	Very shade tolerant. Long lasting white flowers.
Aster, New England	Aster novae-angliae	Forb	FACW	[3,4],5	Seasonal	3-9	Plants, Seed	Cover for birds and mammals.	Attractive purple flowers. Tolerates dry soils.
Aster, New York	Aster novibelgil	Forb	FACW+	[3,4],5	Seasonal		Plants, Seed	Low. Butterflies and beneficial insects.	Pale purple flowers. Tolerates dry soils.
Trumpetweed	Eupatorium fistulosum	Forb	FACW	[3,4],5	Seasonal		Plants, Seed	Moderate. Butterflies, songbirds, and beneficial insects.	Full to partials sun. Tall plant with pink-purple flowers.
Joe-pye-weed, spotted	Eupatorium maculatum	Forb	FACW	[3,4],5	Seasonal		Plants, Seed	Moderate. Butterflies, songbirds, and beneficial insects.	Full to partial sun. Tall plant with pale purple flowers.
Boneset	Eupatorium perfoliatum	Forb	FACW+	[2,3],4	Seasonal		Plants, Seed	Moderate. Butterflies, songbirds, and beneficial insects.	Full to partial sun. Shade tolerant. Long lasting white
Joe-pye-weed, purple	Eupatorium purpureum	Forb	FAC	3,[4,5]	Seasonal		Plants, Seed	Moderate. Butterflies, songbirds, and beneficial insects.	Full to partial sun. Tall with showy flower.
Hibiscus, marsh	Hibiscus moscheutos	Forb	OBL	2,3	0-12"	5-11	Plants	Low. Hummingbirds.	Full to partial sun. Persistent during winter. Drought tolerant. Very showy pink to white flowers.

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Common Name	Scientific Name	Plant Type	Wetland Indicator	Hydrologic Zone	Inundation Tolerance	Hardiness Zone	Commercial Availability	Wildlife Value	Notes
Iris, blue flag	Iris versicolor	Forb	OBL	2,[3,4]	0-6"	2-7	Plants, Seed	Moderate. Food muskrat and wildfowl. Cover, marshbirds. Persists under heavy grazing.	Slow growth. Full sun to partial shade. Tolerates clay. Fresh to moderately brackish water.  Attractive blue flower.
Cardinal flower	Lobelia cardinalis	Forb	FACW+	3,4	Saturated	2-8	Plants, Seed	High. Nectar for hummingbird, oriole, butterflies.	Tolerates Partial shade. Does not persist well. Blood red flower.
Blue lobelia	Lobelia siphilitica	Forb	FACW+	3,4	Saturated		Plants, Seed	Moderate. Butterflies, hummingbirds, songbirds, and beneficial insects.	Full to partial sun. Shade tolerant. Attractive blue flower.
Monkey-flower	Mimulus ringens	Forb	OBL	3,4	Saturated	4-10	Plants, Seed	Low.	Full to partial sun. Interesting flower.
Beebalm, oswego-tea	Monarda didyma	Forb	FAC+	[4,5],6	No	4-9	Plants, Seed	Moderate. Butterflies, humminbirds, and beneficial insects.	
Beebalm, wild bergamot	Monarda fistulosa	Forb	UPL	5,6	No		Plants, Seeds	Moderate. Butterflies, hummingbirds, and beneficial insects.	Sunny, well drained soils. Performs well from seed. Lavender flower.
Waterlily, white	Nyphaea odorata	Forb	OBL	1	1-3'		Plants	Moderate. Good cover for fish.	Full sun to partial shade. Floating leaf with white flower.
Arrow arum	Peltandra virginica	Forb	OBL	[1,2],3	0-1'	5-9	Plants, Bulb, See	High. Berries are eaten by wood ducks.	Full sun to partial shade. NOT eaten by geese or muskrats.
Smartweed, Pennsylvania	Polygonum pensylvanicum	Forb	FACW	2,[3,4]	Saturated, 0-6"		Plants, Seed	High. Good annual seed crop.	Annual, non-persistent.
Pickerelweed	Pontederia cordata	Forb	OBL	1,[2,3]	0-1'	4-11	Plants, Seed	Moderate. Ducks. Nectar for butterflies.	Full sun to partial shade. Attractive purple flower spikes.
Pondweed, long-leaf	Potamogeton nodosus	Forb	OBL	1	1' min - 6'		Plants	High. Food (seeds, roots) waterfowl, aquatic furbearers, deer, moose.  Habitat for fish.	Rapid spread. Flowers float on surface, AugSept. Deep water plant. Turbidity affects rooting
Pondweed, sago	Potamogeton pectinatus	Forb	OBL	1	1' min - 24'		Plants	Extremely high. Waterfowl, marsh and shorebirds.	Removes heavy metals. Deep water plant. Turbidity affects rooting depth.
Black-eyed susan	Rudbeckia hirta	Forb	FACU-	4,[5,6]	No	3-7	Plugs, Seed	Moderate. Butterflies, songbirds, and beneficial insects.	Full to partial sun. Flowers form seed in the first year.
Arrowhead, duck potato	Sagittaria latifolia	Forb	OBL	[1,2],3	0-2'	3-11	ints, Bare-root, Se	Moderate. Tubers and seeds eaten by ducks.	Aggressive colonizer. Shown to have good nutrient uptake properties.
Lizards tail	Saururus cernuus	Forb	OBL	[2,3],4	0-1'	4-11	Plants	Low, except wood ducks.	Aggressive colonizer. Shade tolerant. Interesting white flower spike
Goldenrod, silverrod	Solidago bicolor	Forb	NI	5,6	No		Plants, Seed	Moderate. Butterflies, songbirds, and small mammals.	Full to partial sun. Grows well in infertile soils. Silvery white bloom.
Goldenrod, roughleaf	Solidago patula	Forb	OBL	3,4	Saturated		Seed, Plants	Moderate. Butterflies, songbirds, and small mammals.	Full to partial sun. Attractive yellow blooms.
Goldenrod, stiff	Solidago rigida	Forb	UPL	5,6	No		Plants, Seed	Moderate. Butterflies, songbirds, and small mammals.	Full to partial sun. Attractive vellow blooms.

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Common Name	Scientific Name	Plant Type	Wetland Indicator	Hydrologic Zone	Inundation Tolerance	Hardiness Zone	Commercial Availability	Wildlife Value	Notes
Goldenrod, wrinkleleaf	Solidago rugosa	Forb	FAC	3,[4,5]	No		Plants, Seed	Moderate. Butterflies, songbirds, small mammals, and beneficial insects.	Full to partial sun. Attractive vellow blooms.
Celery, wild	Vallisneria americana	Forb	OBL	1	1' min		Plants, Seed	High. Food for waterfowl. Habitat for fish and invertebrates.	Tolerant of murky water and high nutrient loads. Turbidity affects rooting depth.
Vervain, blue	Verbena hastata	Forb	FACW-	3,4	Saturated		Plants, Seed	Moderate. Butterflies, songbirds, waterfowl, and small mammals.	Full to partial sun. Performs well from seed.
Ironweed, New York	Vernonia noveboracensis	Forb	FACW+	3,4	Saturated		Plants, Seed	Moderate for butterflies.	Full to partial sun. Tall plant with attractive purple flowers.
Coneflower, eastern purple	Echinacea pupurea	Forp	NI	4,[5,6]	No		Plants, Seed	High. Butterlies and birds.	Full sun to partial shade. Long summer bloom with showy rose-
Bluestem, big	Andropogon gerardii	Grass	FAC	[4,5],6	No	3-9	Seed, Plants	High. Seeds for songbirds. Food for deer.	Requires full sun.
Broomsedge	Andropogon virginicus	Grass	FACU-	5,6	No	2-7	Seed, Plants	High. Songbirds and browsers. Winter food and cover.	Tolerant of fluctuation water levels and partial shade.
Grass, redtop	Argostis gigantea	Grass	FACW	2,[3,4]	Seasonal		Seed, Plants	Cover and food for small mammals.	Quick cover for erosion prone areas.
Reedgrass, bluejoint	Calamagrostis canadensis	Grass	FACW+	2,[3,4]	0-6", saturated		Seed, Plants		
Managrass, fowl	Glyceria striata	Grass	OBL	[2,3],4	Seasonal		Plants, Seed		
Fowl mannagrass	Glyceria striata	Grass	OBL	[2,3],4	Seasonal		Plants, Seed	High. Food for waterfowl, muskrat, and deer.	Partial to full shade.
Cutgrass, rice	Leersia oryzoides	Grass	OBL	[2,3],4	0-6"		Plants, Seed	High. Food and cover.	Full sun although tolerant of shade. Shoreline stabilization.
Switchgrass	Panicum virgatum	Grass	FAC	[4,5],6	Seasonal	4-9	Seed and Plants	High. Seeds, cover for waterfowl, songbirds.	Tolerates wet/dry conditions.
Indiangrass	Sorghastrum nutans	Grass	UPL	5,6	No	3-9	Seed, Plants	High. Good food and cover.	Full sun. Grows 4-6 feet tall.
Bluestem, little	Schizachyrium scoparium	Grass	FACU-	6	No	3-9	Seed, Plants		Full sun. Tolerates poor soils and drought.
Sedge, fringed	Carex crinita	Grass-like	OBL	2,[3,4]	Saturated		Plants, Seed	Moderate. Songbirds and waterfowl.  Good food and cover.	Full to partial sun.
Sedge, Pennsylvania	Carex pennsylvanica	Grass-like	NI	5,6	Yes	4-8	Plants, Seed	Moderate. Songbirds and waterfowl.	Partial sun. Shade tolerant.
Sedge, broom	Carex scoparia	Grass-like	FACW	3,[4],5	Sat, 0-6"		Plants, Seed	Moderate. Good food and wildlife cover.	Tolerates moist to dry conditions.
Sedge, tussock	Carex stricta	Grass-like	OBL	1,[2,3],4	Sat. 0-6"	5-9	Plants, Seed	Moderate. Songbirds.	Full sun. Persists during winter.
Sedge, fox	Carex volpinoidea	Grass-like	OBL	1,2,[3],4	Sat. 0-6"		Plants, Seed	High. Songbirds and waterfowl.	Full to partial sun. Prefers fluctuating water levels.
Rush, Canada	Juncus canadensis	Grass-like	OBL	2,[3,4]	Sat. 0-6"		Plants, Seed	Moderate. Songbirds, waterfowl, and small mammals	Full to partial sun. Shown to have good nutrient uptake
Rush, soft	Juncus effusus	Grass-like	FACW+	[2,3],4	0-1'	3-8	Plants, Seed	Moderate	Tolerates occasional dry conditions. Full to partial sun. Shown to have good nutrient uptake properties

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Common Name	Scientific Name	Plant Type	Wetland Indicator	Hydrologic Zone	Inundation Tolerance	Hardiness Zone	Commercial Availability	Wildlife Value	Notes
Bulrush, hard-stem	Scirpus acutus	Grass-like	OBL	[1,2],3	0-3'		Plants, Seed	High. Cover, food (achenes, rhizomes) ducks, geese, muskrat, fish. Nesting for bluegill and bass.	brackish. Good for sediment stabilization and erosion control. Shown to have good nutrient untake
Woolgrass	Scirpus cyperinus	Grass-like	FACW	2,[3,4]	Saturated	4-8	Plants, Seed	Moderate. Cover, food.	Requires full sun. Can tolerate acidic soils, drought. Colonizes disturbed areas, moderate growth. Shown to have good nutrient uptake
Bulrush, three-square	Scirpus pungens	Grass-like	FACW+	[2,3],4	Saturated, 0-6"		Plants, Seed	High. Seeds, cover. Waterfowl and fish.	Shown to have good nutrient uptake. High metal removal.  Drought tolerant.
Bulrush, softstem	Scirpus tabermontanii	Grass-like	OBL	1,[2,3]	0-1'		Plants, Seed	High. Good cover and food.	Full sun. Aggressive colonizer. High pollutant removal.
Bur-reed, American	Sparganium americanum	Grass-like	OBL	[2,3],4	Saturated, 0-6"		Plants, Seed	Good food and cover.	Spreads rapidly. Tolerates partial shade.
Bur-reed, giant	Sparganium eurycarpum	Grass-like	OBL	1,[2,3]	0-12"		Plants, Seed	High. Food (seeds, plant) waterfowl, beaver and other mammals. Cover for marshbirds, waterfowl.	Rapid spreading. Tolerates partial sun. Good for shoreline stabilization. Salinity <0.5 ppt.
Cattail, narrowleaf	Typha angustifolia	Grass-like	OBL	1,[2,3]	0-1'	3-11	Plants	Low food. Good nesting and cover.	Spreads rapidly, can be invasive. Shown to have good nutrient uptake properties.
Cattail, broadleaf	Typha latifolia	Grass-like	OBL	1,[2,3]	0-1'	3-9	Plants	Low food. Good nesting and cover.	Spreads rapidly, can be invasive. Shown to have good nutrient uptake properties.
Alder, speckled	Alnus Rugosa	Shrub	FACW+	2,3	Saturated		Yes	High. Cover, browse for deer, seeds for birds.	
Alder, smooth	Alnus serrulata	Shrub	OBL	[1,2],3	Saturated, 0-3"		Yes	High. Food, cover.	Rapid growth. Stabilizes streambanks. Roots fix N2.
Choke Berry, Red	Aronia arbutifolia	Shrub	FACW	3,[4,5]	Seasonal	4-9	Yes	Moderate. Songbirds.	Bank stabilizer. Partial sun. White flowers with red fruit.
Choke Berry, Black	Aronia melanocarpa	Shrub	FAC	3,[4,5]	Seasonal		Yes	Moderate. Songbirds.	Partial sun. White flowers with black fruit.
Bottonbush, common	Cephalanthus occidentalis	Shrub	OBL	[1,2],3	0-3'	5-10	Yes	High. Ducks and shorebirds. Seeds, nectar and nesting.	Full sun to partial shade. Will grow in dry areas. Interesting flowers and seed.
Pepper-bush, sweet	Clethra alnifolia	Shrub	FAC+	[3,4],5	Seasonal	3-9	Yes	Moderate. Butterflies, songbirds, waterfowl, small mammals, and beneficial insects.	Partial sun. Shade tolerant. Attractive white flower spikes.
Dogwood, silky	Cornus amomum	Shrub	FACW	[3,4],5	Seasonal	5-8	Yes	High. Songbirds and mammals.	Shade and drought tolerant. Good bank stabilizer. White flowers with blue fruit. Stems have good winter color.

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Common Name	Scientific Name	Plant Type	Wetland Indicator	Hydrologic Zone	Inundation Tolerance	Hardiness Zone	Commercial Availability	Wildlife Value	Notes
Dogwood, gray	Cornus racemosa	Shrub	FAC	3,[4,5]	Seasonal		Yes	High. Songbirds, waterfowl, and small mammals.	Full to partial sun. Shade tolerant. Drought tolerant. White flowers and fruit Full to partial sun. Shade
Dogwood, redtwig	Cornus sericia	Shrub	FACW+	[3,4],5	Seasonal		Yes	High. Songbirds, waterfowl, and small mammals.	tolerant. Drought tolerant. Good streambank stabilizer. White flowers and fruit.
Hazel-nut, American	Corylus americana	Shrub	FACU-	4,[5,6]	No	4-9	Yes	Moderate. Songbirds and small mammals	Partial sun to shade. Inhabits dry woodlands. Edible nuts. Wood used for divining rods.
Witch-hazel, American	Hamamelis virginiana	Shrub	FAC-	4,[5,6]	No	4-9	Yes	Low. Food for squirrels, deer, and ruffed grouse.	Unusual flowers in Nov Dec.
Inkberry	llex glabra	Shrub	FACW-	3,[4,5]	Seasonal		Yes	High. Songbirds, waterfowl, and small mammals.	Full to partial sun. Shade tolerant. Evergreen. Avoided by
Winterberry, common	llex verticillata	Shrub	FACW+	[3,4],5	Seasonal	3-9	Yes	High. Cover and fruit for birds. Holds berries into winter.	Full sun to partial shade. Seasonally flooded areas. Red fruits persist through winter.
Spice Bush	Lindera benzoin	Shrub	FACW-	3,4,5	seasonal	5-9	Yes	Very high. Songbirds.	Shade and rich soils. Tolerates acidic soils. Good understory species. Red berries.
Bayberry, northern	Myrica pennsylvanica	Shrub	FAC	[3,4],5	Seasonal		Yes	High. Nesting, food, cover. Berries last into winter.	Coastal Plain species. Roots fix N2. Drought tolerant. Full to partial sun. Susceptible to
Azalea, swamp	Rhododendron viscosum	Shrub	OBL	[3,4],5	Saturated	3-9	Yes	Low. Waterfowl and small mammals.	damage form disease and insects. Showy pink and white
Sumac, smooth	Rhus glabra	Shrub	NI	4,[5,6]	No	3-8	Yes	High. Songbirds, small mammals, and beneficial insects.	Full sun. Drought resistant.
Rose, pasture	Rosa carolina	Shrub	NI	5,6	No	5-9	Yes	High. Songbirds, and small mammals.	Full to partial sun.
Rose, swamp	Rosa palustris	Shrub	OBL	2,[3,4]	Saturated	5-8	Yes	High. Food (hips) for birds including turkey, ruffed grouse and mammals.  Fox cover.	Prefers full sun. Easy to establish. Low salt tolerance. Avoided by deer.
Rose, Virginia	Rosa virginiana	Shrub	FAC	3,[4,5]	Seasonal	3-8	Yes	High. Songbirds, and small mammals.	Full to partial sun.
Blackberry, common	Rubus allegheniensis	Shrub	FACU-	4,5,6	No		Yes	High Butterflies, songbirds, small mammals, and beneficial insects.	Full to partial sun. Edible fruit.
Willow, pussy	Salix discolor	Shrub	FACW	[3,4],5	Yes	4-8	Yes	Low. Buds eaten by grouse.	Furry catkins are a harbinger of spring. Good streambank stabilizer. Roots easily from cuttings
Elderberry	Sambucus canadensis	Shrub	FACW-	3,4,5,6	Yes	3-9	Yes	Extremely high. Food and cover, birds and mammals.	Full sun to partial shade. Drought tolerant. Bears fruit when four years old.
Blueberry, highbush	Vaccinium corymbosum	Shrub	FACW-	[3,4],5,6	Seasonal	3-8	Yes	High. Butterflies, songbirds, waterfowl, and small mammals.	Full to partial sun. Shade tolerant. Prefers acid soils. Attractive plant year round.

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Common	Scientific	Plant	Wetland	Hydrologic	Inundation	Hardiness	Commercial	Wildlife	Notes
Name	Name	Type	Indicator	Zone	Tolerance	Zone	Availability	Value	
Arrow-wood, southern	Viburnum dentatum	Shrub	FAC	3,[4,5],6	Seasonal	4-8	Yes	High. Songbirds and mammals.	Grows best in sun to partial shade. Drought tolerant.
Black-haw	Viburnum prunifolia	Shrub	FACU	4,5,6	No	3-9	Yes	High. Songbirds and small mammals.	Full to partial sun. Shade
	, , , , , , , , , , , , , , , , , , ,							Moderate. Songbirds and small	Full to partial sun. Forms
Box-elder	Acer negundo	Tree	FAC+	3,[4,5]	Seasonal	2-9	Yes	mammals.	thickets. Wood can be brittle.
Maple, red	Acer rubrurn	Tree	FAC	3,[4,5]	Seasonal	3-9	Yes	High. Seeds and browse.	Rapid growth. Tolerates acidic soil.
								Moderate. Songbirds and small	
Maple, silver	Acer saccharinum	Tree	FACW	3,[4,5]	Seasonal	3-9	Yes	mammals. Excellent for cavity nesting wildlife.	Full to partial sun.
D: 1 ·	Details since	-	E4 014/	ro 41 F	0 1	4.0			Bank erosion control. Full sun.
Birch, river	Betula nigra	Tree	FACW	[3,4],5	Seasonal	4-9	Yes	High. Songbirds.	Nice ornamental.
Direk ares	Datula nanulifalia	Trac	FAC	[4.5].6	Cassanal		Vaa	Madarata Canabirda	Short lived tree (30-50 years).
Birch, gray	Betula populifolia	Tree	FAC	[4,5],6	Seasonal		Yes	Moderate. Songbirds.	Early successional species.
								Moderate. Songbirds, waterfowl, and	Partial sun. Shade tolerant.
Ironwood	Carpinus caroliniana	Tree	FAC	3,[4,5],6	Seasonal	3-9	Yes	small mammals.	Small understory tree. Smooth
									grav bark.
Hickory, sweet pignut	Carya glabra	Tree	FACU-	4,[5,6]	No	4-9	No	Moderate. Songbirds, waterfowl, and	Full to partial sun. Hardy and
Thickory, sweet pignat	Garya glabra	1166	1 700-	4,[0,0]	NO	4-3	INO	small mammals.	slow growing.
Hickory, shaq-bark	Carya ovata	Tree	FACU-	4,[5,6]	No	4-8	Yes	Moderate. Songbirds, waterfowl, and	Full sun. Distinctive peeling bark.
Thokory, onag bark	ourya ovata	1100	17100	1,[0,0]	110		100	small mammals.	Partial sun. Shade tolerant.
0 1 40 0 10		_	0.01	r4 03 0 4	0 1 1 1	4.0	.,		Edible nuts, prolific seed
Cedar, Atlantic white	Chamaecyparis thyoides	Tree	OBL	[1,2],3,4	Saturated	4-8	Yes		production. Usually found in
									areas with fluctuating water
									tables Evergreen Full to partial sun. Good nut crop
Beech, American	Fagus grandifolia	Tree	FACU	4,[5,6]	No	4-9	Yes	High. Songbirds, waterfowl, and small	every 2-3 years. Smooth gray
Beech, American	ragus granunona	Hee	FACU	4,[5,6]	INO	4-9	165	mammals.	every 2-3 years. Smooth gray
									All sunlight conditions. Well
Ash, white	Fraxinus americana	Tree	FACU	4,[5,6]	No	4-9	Yes	High. Food.	drained soils. Grows to 100' tall.
Ash, black	Fraxinus nigra	Tree	FACW	3,4,5	Saturated		Yes	Moderate.	Rapid growth.
7 torr, black	Traxinao mgra	1100	171011	0, 1,0	Odtaratoa		100	Moderate.	Rapid growing streambank
Ash, green	Fraxinus pennsylvanica	Tree	FACW	3.4.5	Seasonal	2-9	Yes	Moderate. Songbirds. Prolific seeder.	stabilizer. Full sun to partial
7 to, g. co				0, 1,0	Codoona			moderater congenue: 1 tempo coducit	shade. Small tree 30-50' tall.
									Full to partial sun. Shade
Holly, American	llex opaca	Tree	FACU	4,5,6	No	5-9	Yes	Moderate. Songbirds.	tolerant. Evergreen. Attractive
•	•			, ,				ŭ	red fruits persist through winter.
									Full sun. Good wind break or
Cedar, eastern red	Juniperus virginiana	tree	FACU	4,5,6	No	2-9	Yes	High. Songbirds and small mammals.	screening plant. Early
									successional species. Evergreen
									Full sun to partial shade. Well
Tuliptree	Liriodendron tulipifera	Tree	FACU	4,5,6	No	4-9	Yes	Moderate. Seeds and nest sites.	drained soils. Rapid growth.
		i .				1	l	1	Grows to 120' tall.

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Common Name	Scientific Name	Plant Type	Wetland Indicator	Hydrologic Zone	Inundation Tolerance	Hardiness Zone	Commercial Availability	Wildlife Value	Notes
Blackgum	Nyssa sylvatica	Tree	FACW+	2,[3,4],5	Seasonal	3-9	Yes	High. Songbirds, egrets, herons, raccoons, owls.	Can be difficult to transplant. Prefers sun to partial shade. Nice ornamental with deep red fall color.
Pine, pitch	Pinus rigida	Tree	FACU	4,5,6	No	4-7	Yes	High. Songbirds and small mammals.	Full sun. Old trees are fire resistant due to their thick bark. Grows well on poor sites. Evergreen
Pine, eastern white	Pinus strobus	Tree	FACU	4,5,6	No	3-8	Yes	High. Songbirds and small mammals.	Full sun. Rapid growth. Large and long lived tree. Evergreen.
Sycamore, American	Platanus occidentalis	Tree	FACW-	[3,4],5	Seasonal	4-9	Yes	Low. Food, cavities for nesting.	Rapid growth. Common in floodplains and alluvial woodlands. Drought tolerant.
Cotton-wood, eastern	Populus deltoides	Tree	FAC	[3,4],5	Seasonal	2-9	Yes	Moderate. Cover, food.	Shallow rooted, subject to windthrow. Invasive roots. Will grow on dry sites. Weak wooded Rapid growth
Aspen, big-tooth	Populus grandidentata	Tree	FACU	[4,5,6]	No		Yes	Moderate. Ruffed Grouse eats buds and catkins.	Rapid growing and short lived (40 50 years).
Aspen, quaking	Populus tremuloides	Tree	FACU	[4,5],6	Seasonal	1-7	Yes	Moderate. Buds and some nesting.	Nice fall color. Short lived tree.
Cherry, black	Prunus serotina	Tree	FACU	[4,5],6	No	2-8	Yes	High. Food.	Moist soils or wet bottomland areas. Excellent fruit production. Early successional species.
Oak, white	Quercus alba	Tree	FACU	4,5,6	No	3-9	Yes	High. Songbirds and small mammals.	Full to partial sun. Slow growing.  Longest lived tree in the  northeast.
Oak, swamp white	Quercus bicolor	Tree	FACW+	2,[3,4],5	Seasonal	4-8	Yes	High. Songbirds, waterfowl and small mammals.	Full sun to partial shade. Good bottomland tree. Drought tolerant. Nice ornamental.
Oak, scarlet	Quercus coccinea	Tree	NI	5,6	No	4-9	Yes	High. Songbirds and small mammals.	Full to partial sun. Rapid growing and long lived. Nice fall color.
Oak, pin	Quercus palustris	Tree	FACW	[3],4,5,6	Seasonal	4-8	Yes	High. Songbirds and small mammals.	Gypsy moth target.
Oak, willow	Quercus phellos	Tree	FAC+	[3,4],5	Seasonal	5-9	Yes	High. Songbirds, waterfowl, and small mammals.	Full to partial sun.
Oak, red	Quercus rubra	Tree	FACU-	5,6	No	3-8	Yes	High. Small mammals.	Full to partial sun. Rapid growing and long lived. Valuable timber tree
Willow, black	Salix nigra	Tree	FACW+	[2,3],4	Seasonal		Yes	High. Browsing and cavity nesters.	Rapid growth, stabilizes streambanks. Full sun. Roots easily from cuttings.
Bald Cypress	Taxodium distichum	Tree	OBL	1,[2,3],4	Saturated, 0-2'	4-9	Yes	Little food value, but good perching site for waterfowl.	Tolerates drought.
Basswood, American	Tilia americana	Tree	FACU	[4,5],6	No	2-8	Yes	Moderate. Butterflies, songbirds, small mammals, and beneficial insects.	Partial sun. Shade tolerant. Important pollen source for honey bees.

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Common Name	Scientific Name	Plant Type	Wetland Indicator	Hydrologic Zone	Inundation Tolerance	Hardiness Zone	Commercial Availability	Wildlife Value	Notes
Serviceberry, downy	Amelanchier arborea	ree (small	FAC-	3,[4,5],6	Seasonal	4-9	Yes	Moderate. songbirds and small mammals.	Partial sun. Shade tolerant. Very early spring flowers. Handsome tree.
Serviceberry, shadbush	Amelanchier canadensis	ree (small	FAC	4,5,6	Seasonal	4-7	Yes	High. Nesting, cover, food. Birds and mammals.	Prefers partial shade. Common in forested wetlands and upland woods. Very early spring flowers.
Hackberry, common	Celtis occidentalis	ree (small	FACU	4,5,6	No	3-9	Yes	High. Food and cover.	Full sun to partial shade. Small tree 30-50' tall. Fruit persists into winter.
Redbud, eastern	Cercis canadensis	ree (small	FACU-	4,5,6	No	4-9	Yes	Moderate. Butterflies, songbirds, and small mammals.	Partial sun. Shade tolerant. Nitrogen fixer. Nice ornamental.
Hackberry, common	Celtis occidentalis	ree (small	FACU	4,5,6	No	3-9	Yes	High. Food and cover.	Full sun to partial shade. Small tree 30-50' tall. Fruit persists into winter.
Redbud, eastern	Cercis canadensis	ree (small	FACU-	4,5,6	No	4-9	Yes	Moderate. Butterflies, songbirds, and small mammals.	Partial sun. Shade tolerant. Nitrogen fixer. Nice ornamental.
Dogwood, flowering	Cornus florida	ree (small	FACU-	4,5,6	No	5-9	Yes	High. Songbirds, waterfowl, and small mammals. Fruits eaten by >100 species of bird.	Partial sun to shade. Understory plant in hardwood forests. Nice ornamental.
Magnolia, sweetbay	Magnolia virginiana	ree (small	FACW+	[3,4],5	Seasonal		Yes	Moderate. Seeds.	Southeast part of state. Shade and drought tolerant. Attractive