

WATER

26 Attachment 3

Township of East Rockhill

**Appendix C
Plant Lists for Wetland Management**

**Pennsylvania Stormwater
Best Management Practices Manual**

Appendix B, Pennsylvania Native Plant List



EAST ROCKHILL CODE

Appendix B — Pennsylvania Native Plant List

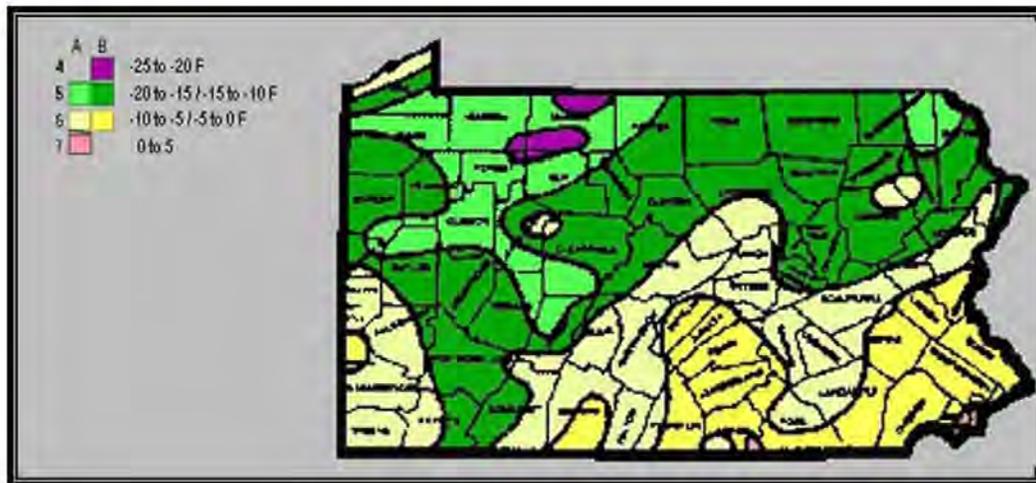
The BMP Plant List contains information about plant species native to Pennsylvania that are suitable for use in any number of BMPs. The list is sorted by plant type and then by scientific name. The table also contains information helpful for designing a planting plan for a successful BMP.

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 (small). Small trees are under story and ornamental trees. These trees are useful when a canopy tree is impractical or an aesthetic impact needs to be made.

Hardiness Zone

Ideal hardiness zone ranges are given for the plants. These zone numbers correspond to the “USDA Plant Hardiness Zone Map”. Pennsylvania is mainly in zones five (5) and six (6). There is a small 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. <http://www.usna.usda.gov/Hardzone/index.html>.



Commercial Availability

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

WATER

Wildlife Value

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

Wetland Indicator Status

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

Since wetland indicator status is generalized and does not represent information about depth or frequency of inundation, the “Inundation Tolerance” “Hydrologic Zone” and fields are also included in this plant list to assist the designer in selecting the appropriate plant species.

Inundation Tolerance

Inundation Tolerance gives information about frequency and depth of inundation that plant species can tolerate during the growing season. A “no” indicates plants that do not survive saturated soils or standing water during the growing season. These are typically upland plants. “Saturated” indicates plants that survive inundation and saturated soils, typically during greater than 50% of the growing season. “Seasonal” indicates that the plant is able to withstand occasional inundation and saturated soils, typically during less than 50% of the growing season. Available information on water depths tolerated by aquatic plants are provided where available. It is difficult to give the exact hydrologic requirements of plants in a general list such as this. As such, we suggest that further research be performed to confirm the requirements of particular species.

Hydrologic Zone

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

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

EAST ROCKHILL CODE

designer chooses to vegetate a deep-water area, then the function of vegetated deep water areas is to absorb nutrients in the water column, enhance sediment deposition, improve oxidation and create additional aquatic habitat.

Select 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 life.

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

Zone 2: Shallow Water Terrace/Aquatic Bench (six inches to 12 inches)

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

Select 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.

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

Appropriate herbaceous species include: water plantain (*Alisma plantago-aquatica*), common three square (*Scirpus pungens*), managrasses (*Glyceria* spp.), blue flag iris (*Iris versicolor*), soft rush (*Juncus effusus*), arrow arum (*Peltandra virginica*), smartweeds (*Polygonum* spp.), pickerelweed (*Pontederia cordata*), duck potato (*Sagittaria latifolia*), lizard tail (*Saururus cernuus*), soft stem bulrush (*Scirpus tabernaemontanii*), giant bur-reed (*Sparganium eurycarpum*) and American bur-reed (*Sparganium americanum*).

WATER

There are few trees or shrubs, such as buttonbush (*Cephalanthus occidentalis*) and black willow (*Salix nigra*), that will become established or survive within Zone 2.

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

Zone 3 encompasses the waterward shoreline of a pond or wetland and its width will be determined by the design slope. This zone will be permanently inundated by the design elevation of any control structures. However, this zone is likely to become dryer during periods of drought. This zone provides the interface between the permanently inundated zone and the seasonally saturated. This zone can be planted with FACW- or FAC plants as identified in the attached BMP Plant List, as plants must be able to withstand periods of inundation as well as drought during the growing season. Zone 3 should be heavily planted to ensure vigorous cover to protect the shoreline. This zone provides opportunities for a number of herbaceous plants, shrubs and trees.

Select 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;
- Provide food and cover for waterfowl, songbirds, and wildlife (large plants can be selected and located to control overpopulation of waterfowl);
- Be located to reduce human access to potential hazards without blocking maintenance access;
- Have little or no maintenance requirements because they may be difficult or impossible to reach; and,

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

EAST ROCKHILL CODE

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

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 include the majority of the temporary extended detention area. The soil substrate will be periodically saturated.

Select plants that can:

- Withstand periodic inundation of water after storms, as well as significant drought during the warm summer months;
- 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;
- provide food and cover for waterfowl, songbirds, and wildlife (plants may also be selected and located to control overpopulation of waterfowl); and
- be located to create a natural barrier to the deeper pools.
- Many species available for planting in this zone also include aesthetic qualities.

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

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

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

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

Select plants that can:

- Withstand infrequent but brief inundation during storms and, between storms, typical moisture conditions that may be moist, slightly wet, or even swinging entirely to drought conditions during the dry weather period;
- Stabilize the basin slopes from erosion;

WATER

- Be very low maintenance as ground cover since they may be difficult to access on steep slopes or mowing frequency may be limited (a dense tree cover may help reduce maintenance and discourage resident geese); and
- Provide food and cover for waterfowl, songbirds, and wildlife.

Some commonly planted species in Zone 5 include: black eyed Susan (*Rudbeckia hirta*), purple coneflower (*Echinacea purpurea*), warm season grasses such as switchgrass (*Panicum virgatum*), Indian grass (*Sorghastrum nutans*), and little bluestem (*Schizachyrium scoparium*), many viburnums (*Viburnum* spp.), Virginia rose (*Rosa virginiana*), Ironwood (*Carpinus caroliniana*), cherries (*Prunus* spp.), red oak (*Quercus rubra*), scarlet oak (*Quercus coccinea*), willow oak (*Quercus phellos*), hickories (*Carya* spp.), eastern red cedar (*Juniperus virginiana*), hackberry (*Celtis occidentalis*) and witch-hazel (*Hamamelis virginiana*).

Zone 6: Upland (never inundated)

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

Some frequently used plant species in Zone 6 include: 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 ornamental trees such as Flowering dogwood (*Cornus florida*) and redbud (*Cercis canadensis*). The herbaceous layer should be seeded or planted with a mix of warm season grasses and upland wildflowers.

Notes

This column contains helpful details about the plant species.

EAST ROCKHILL CODE

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	<i>Dennstaedtia punctilobula</i>	Fern	NI	4,5,6	No	4-8	Plants	Tolerate Deer Browsing	Shade to partial sun.
Fern, marginal shield	<i>Dryopteris marginalis</i>	Fern	FACU-	4,5,6	No	5-8	Plants		Partial sun. Shade tolerant. Evergreen.
Fern, sensitive	<i>Onclea sensibilis</i>	Fern	FACW	[3,4],5	Saturated	4-9	Plants	Moderate. Songbirds and small mammals	Full to partial sun. Shade tolerant
Fern, cinnamon	<i>Osmunda cinnamomea</i>	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	<i>Osmunda regalis</i>	Fern	OBL	2,[3,4]	Saturated	4-9	Plants	Moderate, Small mammals.	Full to partial sun. Shade
Fern, New York	<i>Thelypteris noveboracensis</i>	Fern	FAC	[3,4],5	Saturated	2-8	Plants	Moderate. Songbirds and small mammals.	Partial sun. Shade tolerant. Drought tolerant
Sweetflag	<i>Acorus americanus</i>	Forb	OBL	3,4	Seasonal	Plants, Rhizome		Low food, Good cover	Tolerant of dry periods. Not a rapid colonizer. Tolerates acidic conditions.
Plantain, water	<i>Alisma plantago-aquatica (subcordatum)</i>	Forb	OBL			3-7			
Columbine, wild	<i>Aquilegia canadensis</i>	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	<i>Asclepias incarnata</i>	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	<i>Asclepias syriaca</i>	Forb	NI	5,6	No	4-9	Plants, Seed	High. Food for butterflies (esp. Monarch) and beneficial insects.	Full sun. Drought tolerant.
Butterflyweed	<i>Asclepias tuberosa</i>	Forb	NI	5,6	No	4-10	Plants, Seed	Moderate. Butterflies and beneficial insects	Full to partial sun. Attractive orange flower.

WATER

Common Name	Scientific Name	Plant Type	Wetland Indicator	Hydrologic Zone	Inundation Tolerance	Hardiness Zone	Commercial Availability	Wildlife Value	Notes
Aster, white wood	<i>Aster divercatus</i>	Forb	NI	4,[5,6]	No	4-8	Plants	Low. Butterflies and beneficial insects.	Very shade tolerant. Long lasting white flowers.
Aster, New England	<i>Aster novae-angliae</i>	Forb	FACW	[3,4],5	Seasonal	3-9	Plants, Seed	Cover for birds and mammals.	Attractive purple flowers. Tolerates dry soils.
Aster, New York	<i>Aster novibelgil</i>	Forb	FACW+	[3,4],5	Seasonal		Plants, Seed	Low. Butterflies and beneficial insects.	Pale purple flowers. Tolerates dry soils.
Trumpetweed	<i>Eupatorium fistulosum</i>	Forb	FACW	[3,4],5	Seasonal		Plants, Seed	Moderate. Butterflies, songbirds, and beneficial insects.	Full to partial sun. Tall plant with pink-purple flowers.
Joe-pye-weed, spotted	<i>Eupatorium maculatum</i>	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	<i>Eupatorium perfoliatum</i>	Forb	FACW+	[2,3],4	Seasonal		Plants, Seed	Moderate. Butterflies, songbirds, and beneficial insects.	Full to partial sun. Shade tolerant. Long lasting white flowers.
Joe-pye-weed, purple	<i>Eupatorium purpureum</i>	Forb	FAC	3,[4,5]	Seasonal		Plants, Seed	Moderate. Butterflies, songbirds, and beneficial insects.	Full to partial sun. Tall with showy flowers.
Hibiscus, marsh	<i>Hibiscus moscheutos</i>	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.
Iris, blue flag	<i>Iris versicolor</i>	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	<i>Lobelia cardinalis</i>	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	<i>Lobelia siphilitica</i>	Forb	FACW+	3,4	Saturated		Plants, Seed	Moderate. Butterflies hummingbirds, songbirds, and beneficial insects	Full to partial sun. Shade tolerant. Attractive blue flower.

EAST ROCKHILL CODE

Common Name	Scientific Name	Plant Type	Wetland Indicator	Hydrologic Zone	Inundation Tolerance	Hardiness Zone	Commercial Availability	Wildlife Value	Notes
Monkey-flower	Mimulus ringens	Forb	OBL	3,4	Saturated	4-10	Plants, Seed	Low.	Full to partial sun. Interesting flower.
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	Onclea 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" edible.
Fern, royal	Osmunda regalis	Fern	OBL	2,[3,4]	Saturated	4-9	Plants	Moderate, Small mammals.	Full to partial sun. Shade tolerant.
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 divaricatus	Forb	NI	4,[5,6]	No	4-8	Plants	Low. Butterflies and beneficial insects.	Very shade tolerant. Long lasting white flowers.

WATER

Common Name	Scientific Name	Plant Type	Wetland Indicator	Hydrologic Zone	Inundation Tolerance	Hardiness Zone	Commercial Availability	Wildlife Value	Notes
Aster, New England	<i>Aster novae-angliae</i>	Forb	FACW	[3,4], 5	Seasonal	3-9	Plants, Seed	Cover for birds and mammals.	Attractive purple flowers. Tolerates dry soils.
Aster, New York	<i>Aster novibelgil</i>	Forb	FACW+	[3,4],5	Seasonal		Plants, Seed	Low. Butterflies and beneficial insects.	Pale purple flowers. Tolerates dry soils.
Trumpetweed	<i>Eupatorium fistulosum</i>	Forb	FACW	[3,4],5	Seasonal		Plants, Seed	Moderate. Butterflies, songbirds, and beneficial insects.	Full to partial sun. Tall plant with pink-purple flowers.
Joe-pye-weed, spotted	<i>Eupatorium maculatum</i>	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	<i>Eupatorium perfoliatum</i>	Forb	FACW+	[2,3],4	Seasonal		Plants, Seed	Moderate. Butterflies, songbirds, and beneficial insects.	Full to partial sun. Shade tolerant. Long lasting white flower.
Joe-pye-weed, purple	<i>Eupatorium purpureum</i>	Forb	FAC	3,[4,5]	Seasonal		Plants, Seed	Moderate. Butterflies, songbirds, and beneficial insects.	Full to partial sun. Tall with showy flower.
Hibiscus, marsh	<i>Hibiscus moscheufos</i>	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.
Iris, blue flag	<i>Iris versicolor</i>	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	<i>Lobelia cardinalis</i>	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.
Reedgrass, bluejoint	<i>Calamagrostis canadensis</i>	Grass	FACW+	2, [3,4]	0-6", saturated		Seed, Plants		
Managrass, fowl	<i>Glyceria striata</i>	Grass	OBL	[2,3],4	Seasonal		Plants, Seed		
Fowl managrass	<i>Glyceria striata</i>	Grass	OBL	[2,3],4	Seasonal		Plants, Seed	High. Food for waterfowl, muskrat, and deer.	Partial to full shade.

EAST ROCKHILL CODE

Common Name	Scientific Name	Plant Type	Wetland Indicator	Hydrologic Zone	Inundation Tolerance	Hardiness Zone	Commercial Availability	Wildlife Value	Notes
Cutgrass, rice	<i>Leersia oryzoides</i>	Grass	OBL	[2,3],4	0-6"		Plants, Seed	High. Food and cover.	Full sun although tolerant of shade. Shoreline stabilization.
Switchgrass	<i>Panicum virgatum</i>	Grass	FAC	[4,5],6	Seasonal	4-9	Seed and Plants	High. Seeds, cover for waterfowl, songbirds.	Tolerates wet/dry conditions.
Indiangrass	<i>Sorghastrum nutans</i>	Grass	UPL	5,6	No	3-9	Seed Plants	High. Good food and cover.	Full sun. Grows 4-6 feet tall.
Bluestem, little	<i>Schizachyrium scoparium</i>	Grass	FACU-	6	No	3-9	Seed, Plants		Full sun. Tolerates poor soils and drought.
Sedge, fringed	<i>Carex crinita</i>	Grass-like	OBL	2,[3,4]	Saturated		Plants, Seed	Moderate. Songbirds and waterfowl. Good food and cover.	Full to partial sun.
Sedge, Pennsylvania	<i>Carex pennsylvanica</i>	Grass-like	NI	5,6	Yes	4-8	Plants, Seed	Moderate. Songbirds and waterfowl	Partial sun. Shade tolerant
Sedge, broom	<i>Carex scoparia</i>	Grass-like	FACW	3,[4],5	Sat, 0-6"		Plants, Seed	Moderate. Good food and wildlife cover.	Tolerates moist to dry conditions.
Sedge, tussock	<i>Carex stricta</i>	Grass-like	OBL	1,[2,3],4	Sat. 0-6"	5-9	Plants, Seed	Moderate. Songbirds.	Full sun. Persists during winter.
Sedge, fox	<i>Carex volpinoidea</i>	Grass-like	OBL	1,2,[3],4	Sat. 0-6"		Plants, Seed	High. Songbirds and water fowl.	Full to partial sun. Prefers fluctuating water levels.
Rush, Canada	<i>Juncus canadensis</i>	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	<i>Juncus effusus</i>	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.
Bulrush, hardstem	<i>Scirpus acutus</i>	Grass-like	OBL	[1,2],3	0-3'		Plants, Seed	High. Cover, food (achenes, rhizomes) ducks, geese, muskrat, fish. Nesting for bluegill and bass.	Quick to establish, fresh to brackish. Good for sediment stabilization and erosion control. Shown to have good nutrient uptake

WATER

Common Name	Scientific Name	Plant Type	Wetland Indicator	Hydrologic Zone	Inundation Tolerance	Hardiness Zone	Commercial Availability	Wildlife Value	Notes
Woolgrass	<i>Scirpus cyperinus</i>	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	<i>Scirpus pungens</i>	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	<i>Scirpus faber-montanii</i>	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	<i>Sparganium americanum</i>	Grass-like	OBL	[2,3],4	Saturated, 0-6"		Plants, Seed	Good food and cover.	Spreads rapidly. Tolerates partial shade.
Bur-reed, grant	<i>Sparganium eurycarpum</i>	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	<i>Typha angustifolia</i>	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	<i>Typha latifolia</i>	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	<i>Alnus Rugosa</i>	Shrub	FACW+	2,3	Saturated		Yes	High. Cover, browse for deer, seeds for birds.	Rapid growth. Stabilizes streambanks. Roots fix N2.
Alder, smooth	<i>Alnus serrulata</i>	Shrub	OBL	[1,2],3	Saturated, 0-3"		Yes	High. Food, cover.	Rapid growth. Stabilizes streambanks. Roots fix N2.
Choke Berry, Red	<i>Aronia arbutifolia</i>	Shrub	FACW	3,[4,5]	Seasonal	4-9	Yes	Moderate. Songbirds.	Bank stabilizer. Partial sun. White flowers with red fruit.
Choke Berry, Black	<i>Aronia melanocarpa</i>	Shrub	FAC	3,[4,5]	Seasonal		Yes	Moderate. Songbirds.	Partial sun. White flowers with black fruit.
Bottonbush, common	<i>Cephalanthus occidentalis</i>	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.

EAST ROCKHILL CODE

Common Name	Scientific Name	Plant Type	Wetland Indicator	Hydrologic Zone	Inundation Tolerance	Hardiness Zone	Commercial Availability	Wildlife Value	Notes
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	Corus 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.
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.
Dogwood, redbud	Cornus sericea	Shrub	FACW+	[3,4],5	Seasonal		Yes	High. Songbirds, waterfowl, and small mammals.	Full to partial sun. Shade 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.	Prefers shade. Ornamental. Unusual flowers in Nov. - Dec.
Inkberry	Ilex 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	Ilex 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.	

WATER

Common Name	Scientific Name	Plant Type	Wetland Indicator	Hydrologic Zone	Inundation Tolerance	Hardiness Zone	Commercial Availability	Wildlife Value	Notes
Azalea, swamp	<i>Rhododendron viscosum</i>	Shrub	OBL	[3,4],5	Saturated	3-9	Yes	Low. Waterfowl and small mammals.	Full to partial sun. Susceptible to damage from disease and insects. Showy pink and white flowers
Sumac, smooth	<i>Rhus glabra</i>	Shrub	NI	4,[5,6]	No	3-8	Yes	High. Songbirds, small mammals, and beneficial insects.	Full sun. Drought resistant.
Rose, pasture	<i>Rosa carolina</i>	Shrub	NI	5,6	No	5-9	Yes	High. Songbirds, and small mammals.	Full to partial sun.
Rose, swamp	<i>Rosa palustris</i>	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	<i>Rosa virginiana</i>	Shrub	FAC	3,[4,5]	Seasonal	3-8	Yes	High. Songbirds, and small mammals.	Full to partial sun.
Blackberry, common	<i>Rubus allegheniensis</i>	Shrub	FACU-	4,5,6	No		Yes	High Butterflies, songbirds, small mammals, and beneficial insects.	Full to partial sun. Edible fruit.
Willow, pussy	<i>Salix discolor</i>	Shrub	FACW	[3,4],5	Yes	4-8	Yes	Low. Buds eaten by grouse.	Furry catkins are a harbinger of spring. Good stream-bank stabilizer. Roots easily from cuttings.
Elderberry	<i>Sambucus canadensis</i>	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	<i>Vaccinium corymbosum</i>	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.
Arrow-wood, southern	<i>Viburnum dentatum</i>	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	<i>Viburnum prunifolia</i>	Shrub	FACU	4, 5, 6	No	3-9	Yes	High. Songbirds and small mammals.	Full to partial sun. Shade

EAST ROCKHILL CODE

Common Name	Scientific Name	Plant Type	Wetland Indicator	Hydrologic Zone	Inundation Tolerance	Hardiness Zone	Commercial Availability	Wildlife Value	Notes
Box-elder	<i>Acer negundo</i>	Tree	FAC+	3, [4, 5]	Seasonal	2-9	Yes	Moderate. Songbirds and small mammals.	Full to partial sun. Forms thickets. Wood can be brittle.
Maple, red	<i>Acer rubrum</i>	Tree	FAC	3, [4, 5]	Seasonal	3-9	Yes	High. Seeds and browse.	Rapid growth. Tolerates acidic soil.
Maple, silver	<i>Acer saccharinum</i>	Tree	FACW	3, [4, 5]	Seasonal	3-9	Yes	Moderate. Songbirds and small mammals. Excellent for cavity nesting wildlife.	Full to partial sun.
Birch, river	<i>Betula nigra</i>	Tree	FACW	[3, 4], 5	Seasonal	4-9	Yes	High. Songbirds	Bank erosion control. Full sun. Nice ornamental.
Birch, gray	<i>Betula populifolia</i>	Tree	FAC	[4, 5], 6	Seasonal		Yes	Moderate. Songbirds.	Short lived tree (30-50 years). Early successional species.
Ironwood	<i>Carpinus caroliniana</i>	Tree	FAC	3, [4, 5], 6	Seasonal	3-9	Yes	Moderate. Songbirds, waterfowl, and small mammals.	Partial sun. Shade tolerant. Small understory tree. Smooth gray bark.
Hickory, sweet pignut	<i>Carya glabra</i>	Tree	FACU-	4, [5, 6]	No	4-9	No	Moderate. Songbirds, waterfowl, and small mammals.	Full to partial sun. Hardy and slow growing.
Hickory, shag-bark	<i>Carya ovata</i>	Tree	FACU-	4, [5, 6]	No	4-8	Yes	Moderate. Songbirds, waterfowl, and small mammals.	Full sun. Distinctive peeling bark.
Cedar, Atlantic white	<i>Chamaecyparis thyoides</i>	Tree	OBL	[1,2], 3, 4	Saturated	4-8	Yes		Partial sun. Shade tolerant. Edible nuts, prolific seed production. Usually found in areas with fluctuating water tables Evergreen
Beech, American	<i>Fagus grandifolia</i>	Tree	FACU	4, [5, 6]	No	4-9	Yes	High. Songbirds, waterfowl, and small mammals.	Full to partial sun. Good nut crop every 2-3 years. Smooth gray bark.
Ash, white	<i>Fraxinus americana</i>	Tree	FACU	4, [5, 6]	No	4-9	Yes	High. Food.	All sunlight conditions. Well drained soils. Grows to 100' tall.
Ash, black	<i>Fraxinus nigra</i>	Tree	FACW	3, 4, 5	Saturated		Yes	Moderate	Rapid growth.
Ash, green	<i>Fraxinus pennsylvanica</i>	Tree	FACW	3, 4, 5	Seasonal	2-9	Yes	Moderate. Songbirds. Prolific seeder.	Rapid growing streambank stabilizer. Full sun to partial shade. Small tree 30-50' tall.

WATER

Common Name	Scientific Name	Plant Type	Wetland Indicator	Hydrologic Zone	Inundation Tolerance	Hardiness Zone	Commercial Availability	Wildlife Value	Notes
Holly, American	<i>Ilex opaca</i>	Tree	FACU	4, 5, 6	No	5-9	Yes	Moderate. Songbirds.	Full to partial sun. Shade tolerant. Evergreen. Attractive red fruits persist through winter.
Cedar, eastern red	<i>Juniperus virginiana</i>	Tree	FACU	4, 5, 6	No	2-9	Yes	High. Songbirds and small mammals.	Full sun. Good wind break or screening plant. Early successional species. Evergreen
Tuliptree	<i>Liriodendron tulipifera</i>	Tree	FACU	4, 5, 6	No	4-9	Yes	Moderate. Seeds and nest sites.	Full sun to partial shade. Well drained soils. Rapid growth. Grows to 120' tall.
Blackgum	<i>Nyssa sylvatica</i>	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	<i>Pinus rigida</i>	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	<i>Pinus strobus</i>	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	<i>Platanus occidentalis</i>	Tree	FACW-	[3, 4], 5	Seasonal	4-9	Yes	Low. Food, cavities for nesting	Rapid growth. Common in floodplains and alluvial woodlands. Drought tolerant.
Cottonwood eastern	<i>Populus deltoides</i>	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	<i>Populus grandidentata</i>	Tree	FACU	[4, 5, 6]	No		Yes	Moderate. Ruffed Grouse eats buds and catkins.	Rapid growing and short lived (40-50 years).
Aspen, quaking	<i>Populus tremuloides</i>	Tree	FACU	[4, 5], 6	Seasonal	1-7	Yes	Moderate. Buds and some nesting.	Nice fall color. Short lived tree.
Cherry, black	<i>Prunus serotina</i>	Tree	FACU	[4, 5], 6	No	2-8	Yes	High. Food.	Moist soils or wet bottomland areas. Excellent fruit production. Early successional species.

EAST ROCKHILL CODE

Common Name	Scientific Name	Plant Type	Wetland Indicator	Hydrologic Zone	Inundation Tolerance	Hardiness Zone	Commercial Availability	Wildlife Value	Notes
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.
Serviceberry, downy	Amelanchier arborea	Tree (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	Tree (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	Tree (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.

WATER

Common Name	Scientific Name	Plant Type	Wetland Indicator	Hydrologic Zone	Inundation Tolerance	Hardiness Zone	Commercial Availability	Wildlife Value	Notes
Redbud, eastern	<i>Cercis canadensis</i>	Tree (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	<i>Celtis occidentalis</i>	Tree (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	<i>Cercis canadensis</i>	Tree (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	<i>Cornus florida</i>	Tree (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	<i>Magnolia virginiana</i>	Tree (small)	FACW+	[3, 4], 5	Seasonal		Yes	Moderate. Seeds.	Southeast part of state. Shade and drought tolerant. Attractive and fragrant flowers.