



Native PA Species Shrubs and Trees Eligible for Stormwater Credits in Crawford County.

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FLOWERING DOGWOOD
Cornus florida L.
DOGWOOD FAMILY

Native PA Species Shrubs Eligible for Stormwater Credits in Crawford County.

Red Chokeberry-- *Aronia arbutifolia* / *Photinia pyrifolia* —E, J

Native habitat: swamps, bogs, moist woods. A colonial shrub species, grows from 3' to 15' tall, prefers **full sun**, low drought tolerance, blooms from April to July, white flowers, produces pear shaped red fruit that persists into winter. **Moist rich acidic soils**. Fall foliage red to red orange. **A source of wildlife cover and fall food.**



Black Chokeberry-- *Aronia melanocarpa* / *Photina* — E

Native habitat: swamps, bogs, wet or dry woods. Shrub grows to 12' tall, somewhat shade tolerant, **moderate drought tolerance**, blooms from March to June, white flowers produce black fruit that persists into winter. Prefers **part shade and moist acidic soils**. **Good source for wildlife cover and fall food.**



Kinnikinnik/Silky Dogwood—*Cornus amomum*— E

Native habitat—Moist fields, meadows, swamps, moist woods **Part Shade to Shade** in **Clay, Loam, or Sandy soil**. A shrub that grows to 10' tall, moderate shade tolerance, low drought tolerance, blooms from May to July with attractive white, greenish whitish or yellow flowers clusters in spring, produces blue and white fruit in the fall. **The thick low vegetation provides excellent habitat for a variety of wild life and produces abundant fruit that is eaten by many birds.**



Red-osier Dogwood—*Cornus sericea*—E, J

Native Habitat: swamps, stream banks, moist fields, thickets **Prefers part shade and moist, well drained soils** but is adaptable to a wide range of soil and climatic conditions. A multiple stemmed shrub grows to 10' tall, moderate shade tolerance, moderate drought tolerance, blooms from June to August, attractive clusters of white flowers produce white fruit. Very conspicuous red branches in winter. The thick low vegetation provides excellent habitat for a variety of wildlife, **produces abundant fruit that provides fall and winter food for a variety of birds.**



Native PA Species Shrubs Eligible for Storm-water Credits in Crawford County.

Witch hazel-- *Hamamelis virginiana*—E, J, SY

Native habitat: Rich rocky woods. A Multiple stemmed shrub with crooked spreading branches with lettuce green leaves that turn brilliant gold in fall. Prefers **rich, well-drained acid based soil**. Bark is smooth and gray. Averages 10-15' but can grow to 30' tall, **sun to moderate shade**, low drought tolerance, blooms from September to November with strap like crumpled yellow flowers. **Produces small brown nuts in the fall which provide fall food for many forms of wildlife, provides mid-story nesting habitat.**



Mountain Laurel—*Kalmia latifolia*—BF

PA State flower. Found in southern part of the watershed on dry to moist acidic woods and slopes. A broadleaf evergreen, many-stemmed, thicket-forming shrub or sometimes a small tree with short, crooked trunk; stout, spreading branches; a compact, rounded crown; and beautiful, large, bell-shaped, white to pink flowers with deep rose spots inside that occur in flat-topped clusters. The leaves are oval, leathery, and glossy, and change from light-green to dark-green to purple throughout the year. **Prefers part shade and cool, moist acidic rocky or sandy soils**. All parts are highly toxic, **Attract birds and larval host for Laurel Sphinx moth.**



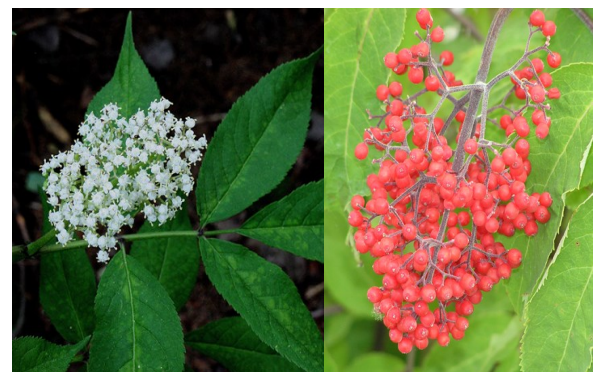
Common Elderberry —*Sambucus Canadensis*—BF, E

Deciduous, fast-growing, suckering **shrub**. Flat-topped, creamy white flower clusters in early summer followed by edible, deep purple berries. Height: 5-12'. Spread: to 12' or more. **Part sun. Moist, average soil**. Best used in informal garden situations and for naturalizing, especially at the wood or meadow edge. Prune back old or weak canes to trunk near the ground in winter every few years. Flowers provide nectar and birds love the fruit. **Rain garden plant.**



Red Berried Elder—*Sambucus racemosa (Pubens)*—BF

Deciduous, fast-growing, suckering shrub. Flat-topped, creamy white flower clusters blooms earlier in spring and produces bright red fruits in early summer. Height: 4-10'. Spread: 3-8' or more. **Part sun. Moist, average soil**. Best used in informal garden situations and for naturalizing, especially at the wood or meadow edge. Prune back old or weak canes to trunk near the ground in winter every few years. ****The stems, roots and foliage are poisonous or toxic. Flowers provide nectar and birds love the fruit. Rain garden plant.**



Native PA Species TREES Eligible for Stormwater Credits in Crawford County.

Red Maple—*Acer rubrum*—J, E

Found in dry to moist woods, swamps and bogs. A single stemmed deciduous tree that grows from 60' to 120' tall, named for its often red autumn leaf display. **Sun to shade** tolerant, low drought tolerance, **tolerant of most soils, but prefers slightly acid, moist conditions**; blooms from March to May, red flowers, seed mature in spring. Limited use for maple syrup but **provides food, browse and nesting sites for wildlife**. **Leaves and bark poisonous to livestock**. Larval host to **Cecropia Moth**.



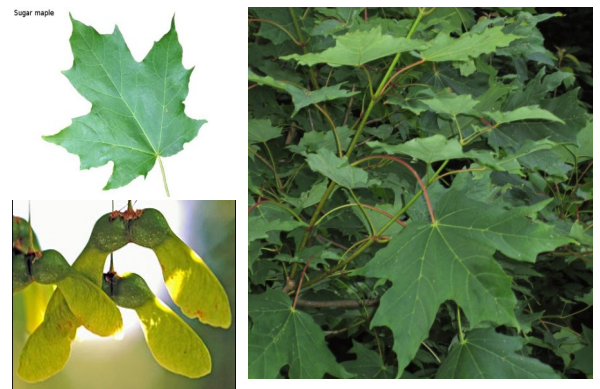
Silver Maple—*Acer saccharinum* L—SY

Found in moist woods, stream banks and alluvial soils. Prefers **sun to shade with rich wet to moist acidic soils**. A large deciduous tree with short, stout trunk, few large forks, spreading, open, irregular crown of long, curving branches, and graceful deep cut-leaves with a silvery underside. Grows 75-100 ft. tall with a oval or rounded crown. Plump, red flower buds are visible in winter and the first to bloom in spring. Fall color ranges from yellow-brown to yellow tinged with bright red. Sugar can be obtained from the sweet sap but yield is low. **Larval and nectar source for Cecropia silkmoth**.



Sugar Maple—*Acer saccharum*— J, E, SY

Often found in moist woods, wooded slopes, ravines, alluvial soils. A single stemmed large tree, with rounded, dense crown and striking, multicolored foliage in autumn. Grows from 60' to 100' tall, **prefers sun but is shade tolerant**, moderate drought tolerance, **prefers rich, moist, well-drained soils**, susceptible to salt, excessive heat, and leaf scorch in drought. Blooms from February to June, yellow flowers, seeds mature in fall. Excellent source for maple syrup and timber, **provides food and nesting sites for wildlife**. **Valuable to honey bees**.



Native PA Species TREES Eligible for Stormwater Credits in Crawford County.

Common Serviceberry—*Amelanchier arborea*—BF, PC,SY

Also known as Shadbush, this deciduous small tree grows from 15-25 ft. and is often found on rocky bluffs and upper slopes. It prefers **sun to part shade and dry well drained acidic soil**. The white flowers occur in April and May in drooping clusters, appearing before the leaves. Young leaves are covered with soft, woolly hairs that disappear as the leaf matures. The plant's ornamental bark is gray and smooth but streaked with fissures; often with a reddish cast. Old bark is scaly. Small, edible berries are reddish-purple. The leaves may turn wine-red in fall. The names Shadbush allude to the fact that the showy masses of white flowers tend to occur at the same time that shad ascend the rivers in early spring to spawn. This is the plant that is commonly sold in the nursery trade as *Amelanchier canadensis*. **Attracts bees and birds.**



Hornbeam-- *Carpinus caroliniana*—E

Also known as Blue beech, Musclewood or Ironwood because of the very hard wood. Found in rich moist woods and stream edges. Small, shrubby slow growing tree with one or more short trunks angled or fluted, long, slender, spreading branches, and broad, rounded crown growing to 40 ft. The graceful, drooping branches and slender trunk are pale gray, smooth and sinewy with twisting, muscle-like bulges. Shiny, bluish-green, deciduous leaves become scarlet-orange in the fall. The hanging fruit is papery in texture. **Shade tolerant**, low drought tolerance, **moist, rich, deep acidic soils**. Blooms in April. **Provides food; seeds, buds and catkins for birds and wildlife. Larval Host: Eastern Tiger Swallowtail, Striped hairstreak, Red-spotted Purple, Tiger swallow-tail.**



Shagbark Hickory-- *Carya ovata*—BF

Found in low moist woods, stream banks, swamps, flood plains, and bottom-land. Medium to large tree with height: to 70'. Width: to 35'. Blooms yellow-green in spring. Produces thick shelled edible nuts and golden or bronze leaves in fall. Distinctive, gray bark that peels in long, tough curls off the straight trunk. Trunk typically narrow and straight with branching that begins half-way up. **Full to part sun. Rich, moist soil, but adaptable.** Must have good drainage. Site carefully. Deep taproot makes transplanting of all but young seedlings impossible. Valuable for fuel and lumber. **Butterfly and wildlife plant.**



Native PA Species TREES Eligible for Stormwater Credits in Crawford County.

Tulip Tree/Yellow Poplar-- *Liriodendron tulipifera*—J,SY

A common tree in rich woods. One of the tallest and most beautiful eastern hardwoods, with a long, straight trunk, a narrow crown that spreads with age. **Sun to shade. Rich moist, well drained soils.** Grows up to 150 ft. tall. Distinctive, star-shaped foliage. The leaves are waxy and smooth, and turn bright gold in fall. Showy, yellow-orange, tulip-like flowers are often missed because they are up 50 ft. or higher in the tops of trees. Cone-shaped seed heads remain after leaves have fallen. Pioneers hollowed out a single log to make a long, lightweight canoe. One of the chief commercial hardwoods, its used for furniture, as well as for crates, toys, musical instruments, and pulpwood. **This is a favorite nesting tree for birds and the flowers attract hummingbirds and bees.** Larval Host: Eastern Tiger Swallowtail butterfly.



Black Gum (Tupelo) — *Nyssa sylvatica*—J, SY

Found on dry to moist woods, rocky slopes and ridge tops. An attractive, variable-shaped deciduous tree, with many slender, nearly horizontal branches with a dense, conical or sometimes flat-topped crown and glossy waxy foliage turning scarlet in autumn. Grows 30-60 ft. in **full sun to shade** in **moist various acid based soil.** Leaves out late. Good for a bog or water garden area. A bottle-shaped trunk forms if grown in shallow standing water. Deep roots allow for under-plantings of shrubs and wildflowers. Specimen or street tree. **Berries are small and blue and consumed by many birds and mammals. Also a nectar plant for bees.** Protect from deer until well-established and sizeable. **Rain garden plant.**



Eastern White Pine-- *Pinus strobus*—BF, J, SY

Found in moist to dry woodlands and forested slopes. A stately canopy tree, 75-100 ft. tall, **Sun, part shade, shade. Prefers fertile well drained dry to moist soils.** Gracefully plume-like in outline, white pine is very distinctive when compared to other conifers. Tufts of light- to bluish-green long needles form feathery clusters of five only toward the ends of the twigs. Cones are 6-8 in. long. The largest northeastern conifer, it is a magnificent evergreen tree with straight trunk and crown of horizontal branches, one row is added a year, becoming broad and irregular. Formerly the most valuable tree of the Northeast, Eastern White Pine is used for construction, millwork, trim, and pulpwood. **Attracts birds and mammals for food and shelter**



Native PA Species TREES Eligible for Stormwater Credits in Crawford County.

Sycamore—*Platanus occidentalis*—E

Found near stream banks, low woods, and alluvial soils. A wide-canopied, deciduous tree, 75-100 ft. tall, with a massive trunk and open crown of huge, crooked branches. Grows in **sun to shade in moist, sandy loams or silty clay soils**. The bark of large, old trunks sloughs off in scales or plates leaving a smooth, whitish inner bark making the tree look like camouflage material. Leaves are broad, blade often wider than long, long pointed. Globular fruits often persist through December. Large, medium- to dark-green, maple-shaped leaves turn brown in fall. A shade tree, Sycamore grows to a larger trunk diameter than any other native hardwood. **The hollow trunks of old, giant trees were homes for chimney swifts in earlier times. Attracts birds and is deer resistant.**



Wild Black Cherry-- *Prunus serotina*—E

Found in woods, thickets, floodplains and fencerows. A multiple stemmed, easy and fast growing tree, it reaches heights to 80' tall. When open-grown it becomes oval-headed with spreading, pendulous limbs and arching branches. Crowded trees grow tall and slender. Drooping white flowers appear after the glossy leaves have emerged. Prefers **full sun to part shade** and **neutral to acidic soils**. Moderate drought tolerance, blooms in May, white flowers produce purplish black fruit in the fall. While the fruit is edible and used in beverages and cooking, the rest of the plant contains amygdalin and can be toxic if consumed. One of North America's most valuable hardwoods. **Provides food, and nesting sites for wildlife. Fruit consumed by 33 species of birds and many mammals. Also attracts bees and butterflies.**



Northern White Oak—*Quercus alba*—E

A large tree with an irregular shaped, wide spreading crown, with light gray bark that has shallow furrows forming scaly ridges. Twigs are gray to reddish-green; buds are reddish-brown and broadly oval and hairless. Catkins appear just before or with the appearance of new leaves which are 4 - 8 inches long with 5 - 9 lobes that are widest beyond middle with deep sinuses and broadly rounded lobes; dull or shiny grayish green above, light green beneath. Grows to 100' tall, **prefers sun but has moderate shade tolerance**, moderate drought tolerance, blooms in mid spring. Can grow in dry to moist sites but **prefers well drained deep loam or sandy, acid based soils**. The wood is used for furniture, flooring, and specialty items such as wine and whiskey barrels. **The annual acorns provide food for many animals and birds. Attracts butterflies. Larval host to Edwards Hairstreak butterfly.**



Native PA Species TREES Eligible for Stormwater Credits in Crawford County.

Swamp White Oak—*Quercus bicolor* — J, E

A large, wide, round-topped, deciduous tree found in low moist forests. One of the faster growing oaks, its leaves, with their silvery undersides, are typical of those of white oak, yet swamp white oak leaves lack deeply cut lobes and the distal half may have teeth. Tree grows to 100 feet with an irregular crown. Bark is dark gray with deep furrows forming scaly or flat-ridges. Twigs are smooth, light brown; buds light orangish-brown, smooth, and blunt, leaves are glossy dark green above with white velvety hairs beneath. Fall leaf color is golden-brown to russet-red. Moderate shade tolerance, low drought tolerance, blooms in early spring, produces long egg shaped acorns annually. Prefers **part shade** and can thrive in **poorly drained, heavy or fine loams or clay soils that are somewhat acidic**. Swamp white oak produces a hard wood that has been used for construction, cabinet making, boat building, railroad ties, and fencing. **Attracts songbirds, ground birds, water birds and mammals.**



Pin Oak-- *Quercus palustris*—J, E , SY

Found in low moist wet woods, bottomlands and swamps. A popular, graceful lawn tree with regular compact form and fine-textured foliage, Pin Oak is hardy and easily transplanted because the shallow fibrous root system lacks tap roots. Grows to 80' tall, prefers **full sun** but will tolerate shade, low drought tolerance, blooms in spring, small acorns mature and drop early fall. One of the fastest growing oaks, it is straight-trunked tree with spreading to horizontal branches, very slender pin-like twigs, and a broadly conical crown. Pin oak is a strongly pyramidal tree with a distinct central leader with a more graceful, slender appearance than most oaks. Dark-green foliage becomes dark-red in fall. Leaves persist into winter. Will grow in heavy, poorly **drained soils but is intolerant of alkaline soils**. Somewhat tolerant of city conditions, it is easily transplanted, and will tolerate urban conditions in areas well outside its natural range. **Provides food and nesting sites for birds and woodland wildlife. Attracts birds, hummingbirds and butterflies. Larval host for the Gray Hairstreak butterfly.**



Northern Red Oak--*Quercus rubra*--E, SY

A lowland forest tree, found in dry to moist sites. A single stemmed deciduous tree, grows to 100' tall, moderate shade tolerance, moderate drought tolerance, blooms in mid spring, large acorns mature and drop in early fall. Its straight trunk is clear of branches for some distance above the ground and supports a wide canopy. The dark bark is striped with long, smooth plates separated by deep furrows. Leaf lobes are bristle-tipped. Fall color is can be crimson, golden-orange, or russet. **Prefers sun to part shade in well drained loamy sand.** The northernmost eastern oak, it is the most important lumber species of red oak—used for flooring, furniture, millwork, railroad cross-ties, mine timbers, fence posts, pilings, and pulpwood. A popular shade and street tree, with good form and dense foliage. One of the most rapid-growing oaks, it transplants easily, is hardy in city conditions, and endures cold. **Provides food and nesting sites for birds and woodland wildlife.**



Native PA Species TREES Eligible for Stormwater Credits in Crawford County.

Black Willow— *Salix nigra*—E

Found in swamps, wet meadows, and along streams in rich alluvial soils. A multiple stemmed, open crowned, tree, grows to 65' tall, prefers **full sun**, in **clay loam or sandy soils**. Blooms from February to June with inconspicuous flowers arranged in elongate clusters; male and female flowers on separate trees. A fast-growing tree, with leaf blades up to 5 inches long, narrow and tapering to an elongate tip, margins finely serrate. Bright yellow-green twigs bear yellow-green catkins. Seeds wind-borne on silky hairs. The bark is deeply furrowed. Live stakes have excellent rooting ability and produce fibrous roots. **Leaf drops replenish organic life in streams and it provides wildlife habitat and shade.** This is the largest and most important willow with one of the most extensive ranges across the country.



These Native PA Species TREES are also Eligible for Storm-water Credits in Crawford County but have no known local source:

Latin Name	PA Native Habitat
<p><i>Magnolia Acuminata</i> Cucumber Tree</p>	<p>Rich upland woods and slopes. A hardy, large, round-topped, deciduous tree. Grows 60-75 ft. tall and wide. Its leaves are 6-10 in. long, deep-green in summer and yellow-brown in fall. Flowers are not showy; only 2 in. across and greenish in color occurring at the top of the tree. They are followed by a cucumber-like fruit which turns from green to red. Tolerates sun to shade in rich moist to wet acidic soil.</p>
<p><i>Populus Deltoids</i> Eastern Cottonwood</p>	<p>Found on riverbanks, floodplains in rich alluvial soils. A large-canopied deciduous tree with upright limbs growing to 100 ft. or more. Catkins appear before leaf emergence. Large, papery, coarsely toothed, triangular, medium-green leaves turn yellow in fall. Pendulous clusters of flowers without petals in late March and early April. Seeds wind-borne on a tuft of cottony hairs—thus the name. A fast growing species that is often short lived. Tolerates sun to shade in moist sandy, loamy or clay loam soils.</p>
<p><i>Populus Grandidentata</i> Big Tooth Aspen</p>	<p>Early successional woods and flood plains. A columnar tree 50-75 ft. tall. Toothed leaves are cottony-white on the lower surface, especially when the tree is young. The slender trunk's whitish bark, becomes furrowed at base and darker gray with age. Silvery catkins appear before leaves. Deciduous foliage becomes golden-yellow in fall. Big Tooth Aspen is a pioneer tree after fires and logging and on abandoned fields, short-lived and replaced by conifers. The foliage, twig buds, and bark are consumed by wildlife. Prefers full sun and consistent moist, rich soils.</p>
<p><i>Populus tremuloides</i> Quaking Aspen</p>	<p>Old fields, open woods, or barrens. A 35-50 ft. deciduous tree with small, nearly round, shiny leaves which quiver in the slightest breeze. Smooth, whitish-green bark becomes furrowed at the trunk's base with age. Silvery catkins appear before leaves. Fall color is bright yellow. An early successional tree after fires, logging and on abandoned fields, it is short-lived and replaced by conifers. The twigs and foliage are browsed by many animals. Beavers, rabbits, and other mammals eat the bark, foliage, and buds, and grouse and quail feed on the winter buds. Tolerates sun to shade in sandy, gravely limestone based soils.</p>
<p><i>Tilia americana</i> American Linden / Basswood</p>	<p>Rich woods. A stately, wide-spreading deciduous tree, 60-80 ft. tall. Conical in its younger form, the crown becomes rounded with age. Broadly oval leaves sometimes change to yellow in fall but often turn brown and become somewhat unsightly. Flowers are inconspicuous but fragrant. When flowering, the trees are full of bees and produces a strongly flavored honey. The soft, light wood is especially useful for making food boxes, yardsticks, furniture, and pulpwood. Indians made ropes and woven mats from the tough fibrous inner bark. Tolerates sun to shade in moist, rich, well-drained, loamy soils.</p>

The following 26 species are not eligible for stormwater credits in Crawford County, but are highly recommended for stormwater management. They can tolerate extended periods or seasonal inundation of rain.

Thin-leaved Sunflower-- *Helianthus decapetalus*—BF,E

Yellow, 2-4" wide, daisy-like flowers in late summer and early fall. Height: 2-5'. **Part shade. Moist, average soil.** Spreads aggressively by underground rhizomes. Circle clump with a sharp spade in spring and pull out undesired stems. Best used for naturalizing, especially on banks. **Bird and butterfly plant. Shadier rain garden plant.**



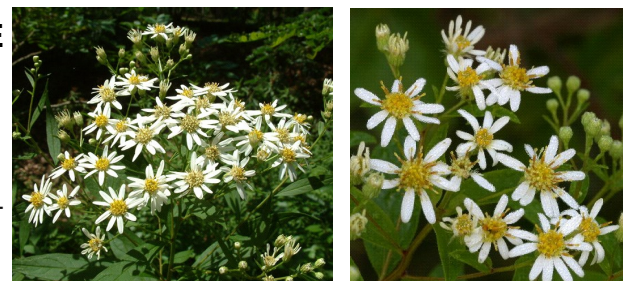
White Turtlehead —*Chelone glabra*—BF, E, SY

Flowers white tinged with pink and clustered among top-most leaves in late summer. Height: 3'. Width: 2'. **Part sun. Moist to wet, average soil.** Good for somewhat shady spots, but blooms best with at least a few hours of sun. Adaptable, but cannot tolerate drought. Pinch tips in June to control height and promote bushiness. Easy to divide and transplant in spring. Difficult to confine to neat clumps due to wide-ranging rhizomes, so best used for naturalizing. Trou-



White flat-topped Aster —*Doellingeria umbellata*—BF, E

Flat clusters of white flowers with yellow-green centers in late summer. Clean foliage. Bushy. Needs space. Height: 3-7'. Width: 3-4'. **Part sun. Moist, average soil.** Cut back by half in June to control height. Self-sows aggressively. Deadhead to prevent. Divide every 4-5 years. One of the earliest blooming asters. Adaptable and easy.



Oxeye, False Sunflower — *Heliopsis helianthoides*—BF,E,PC,J

Yellow, 2-3" wide blooms from mid-summer to fall. Height: 3-5'. Width: 3'. **Part sun. Average soil.** Forms thick, non-spreading clumps. Use in the middle of a border, in a meadow with grasses, in open woods or at the wood edge. Long-



Cardinal Flower—*Lobelia cardinalis*—BF, E, PS, SY

Blooms red (occasionally white or salmon) on a spike from an evergreen rosette in mid-summer. Height: 2-4'. Width: 1'. **Part sun. Moist, well-drained, rich soil.** Protect offsets for next year's growth by keeping plants free from heavy mulch and all weeds in fall. Mulch with pine straw or other light material in winter, but pull back early in spring to prevent rot. Water during drought. Striking in borders or near a pond or stream. Self-sows where happy. Hum-



Boneset-- *Eupatorium perfoliatum*—BF, E

Blooms in hazy, white, flat heads in late summer. Height: 2-4'. Width: 2'. **Part sun. Moist to wet, average soil.** Foliage interesting as stem appears to pierce leaves. Emerges late in spring. May be short-lived but self-sows. Lovely massed or used in meadows, wild gardens or at the edges of ponds or streams. Good in combination with Joe-Pye Weed and ironweeds. Lovely with cattails. Good cut or dried flower. **Excellent nectar plant. Rain garden plant.**



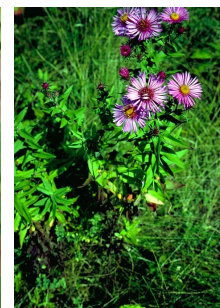
Summer Phlox / Garden Phlox—*Phlox paniculata* — BF, PC, J, SY

Blooms pink, lavender or white in late summer. Height: 3-5'. Width: 2-3'. **Part sun, morning sun or dappled light. Evenly moist, very fertile soil.** This plant is usually found on floodplains. It will not survive drought. May develop powdery mildew. Allow space for air circulation and avoid overhead watering to help prevent. The native species is more vigorous and disease resistant than the cultivars. **Shadier rain garden plant. Butterfly plant**



New England Aster—*Symphotrichum novae-angliae* — BF, E, J, PC

Forms clusters of 1-2" wide, violet-purple to pink flowers with orange centers in fall. Height: 3-7'. Width: 2-3'. **Part sun. Moderate to moist, average soil.** Forms thick clumps in time. Cut back by half in June to promote bushiness and control height, or stake. Readily self-sows. Deadhead to prevent. Divide every 3 years in spring. Often suffers from leaf blight on lower stems. Plant shorter species in front to hide. **Good fall nectar source and food plant for butterfly larva. Rain garden plant.**



Swamp Milkweed—*Asclepias incarnata*—BF, E, PC, SY

Flat clusters of rosy-pink flowers on stiff stems in July and August, followed by interesting seed pods. Height: 3-4'. Width: 2'. **Sun. Medium to very moist, average soil.** Clumping habit. Never needs dividing. Plant in a permanent location and allow to die back naturally. Self-sows. Deadhead to prevent. Use in a meadow, beside a pond or stream or massed in an informal garden. **Butterfly plant. Rain garden plant. Deer resistant.**



Tall Tickseed—*Coreopsis tripteris*—BF, E, PC

Blooms yellow, 2" wide, daisy-like flowers on strong stems in mid-summer. Height: 4-7'. Width: 3'. **Sun to part sun. Moist to wet, average soil.** A clumping plant. Divide in spring every 3-5 years. Cut back by half in June to control height and promote bushiness. Impressive species for back of border or to mix with tall grasses and asters in a meadow. Self-sows. Deadhead to prevent. **Rain garden plant**



Joe-Pye Weed—*Eupatorium fistulosum*—BF, E, PC, SY

Blooms in flat clusters of mauve flowers in late summer. Height: 4-8'. Width: 3-4'. **Part to full sun. Moist to wet, fertile soil.** Emerges late in spring. Pinch plants to promote fullness, or cut back by up to half in June to control height. Use at back of border, in butterfly and wild gardens, in meadows or at edges of ponds or streams. Easy and trouble-free except for some minor foliage damage from insects. **Excellent nectar plant. Rain garden plant.**



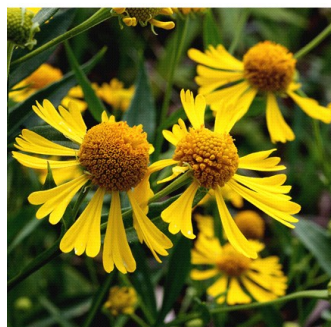
Spotted Joe-Pye Weed—*Eupatorium maculatus*—BF, E, PC

Similar to *Eupatoriadelphus fistulosus*, but with purple or purple-spotted stems. Blooms in flat clusters of mauve flowers in late summer. Height: 4-8'. Width: 3-4'. **Part to full sun. Moist to wet, fertile soil.** Emerges late in spring. Pinch plants to promote fullness, or cut back by up to half in June to control height. Use at back of border, in butterfly and wild gardens, in meadows or at edges of ponds or streams. Easy and trouble-free except for some minor foliage damage from insects. **Excellent nectar plant. Rain garden plant**



Helen's Flower / Common Sneezeweed—BF, E *Helenium autumnale*

Daisy-like yellow flowers with squared-off edges bloom on stout stems in late summer. Height: 3-5'. **Sun to part sun. Moist to wet, average soil.** Transplant only in spring. Pinch plants in mid-May and again in early June for more compact growth and more flowers, or cut back by half in June. Deadheading prolongs bloom. Individuals short-lived, but plant self-sows freely. Nice with other tall, late-blooming moisture lovers such as New England Aster and New York Ironweed. **Rain garden plant. Deer resistant.**



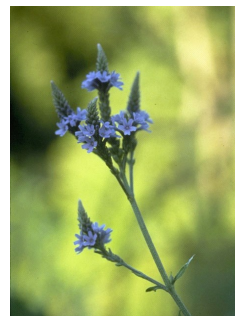
Bee Balm—*Monarda didyma*—BF, PC, J

Blooms red in summer. Height: 3-4'. Width: 18". **Sun to part sun. Moist, fertile soil.** Allow plenty of room as plants spread moderately fast by shallow rhizomes. Drier, less fertile soils will slow spread. Foliage susceptible to powdery mildew. Cut back to clean foliage and discard. (Do not compost.) Divide every 3 years. Good for naturalizing at the wood edge, in front of shrubs or in a low spot. Combine with other Monarda species for color contrast. **Hummingbird and butterfly plant. Rain garden plant. Deer resistant**



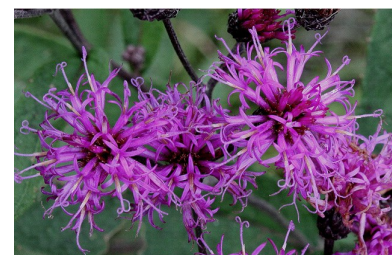
Blue Vervain—*Verbena hastata*—BF, E

Blooms dark, blue-violet on stiff, upright stems from summer to fall. Height: 2-6'. Width: 12-16". **Sun to part sun. Moist to wet, moderately fertile soil.** Forms clumps. Self-sows. Deadhead to prevent. Use at edge of pond or stream or in a moist meadow. A nice companion to yellow-blooming meadow species and other blue-purple late bloomers such as Joe-Pye-Weed and ironweeds. **Rain garden plant. Deer resistant**



Giant Ironweed—*Vernonia gigantea (altissima)*—E

Grows 3-9' tall. **Damp rich soil. Sun to part shade.** Single stem with purple flowers blooms in fall. Very adaptable and hardy. Found in moist fields, meadows and floodplains. **Provides seeds for birds, pollinator attractive. Rain garden plant.**



Buttonbush—*Cephalanthus occidentalis*—BF, E

Deciduous **shrub**. Creamy white flower balls in summer. Large, bold foliage. Height: 3-10'. Width: 3-6'. **Part to full sun. Moist to wet soil.** Plant in standing water, at the very edge of a pond or stream or in soil that stays moist. Will not tolerate drought. Apply a little balanced fertilizer in spring. Cut back to 1' in winter for lower, rounded growth, pruning to one or two trunks and removing dead twigs, or allow to die back naturally for a rougher, more natural appearance. **Butterfly plant.**



Winterberry / Black Alder—*Ilex verticillata*—E, J, SY

Native habitat: swamps, bogs, moist woods, wet shores. A multiple stemmed shrub grows 16" tall, **Sun, Part Shade, Shade. Moist, acidic soils including sandy, loam or clay loam.** Low drought tolerance, blooms from May to August, small greenish white flowers produce bright red berries that last into winter. **The berries provide fall and winter food for birds and wildlife.** Winterberry tolerates poor drainage and is quite winter-hardy. You must have both a male and female plant to have berries. The male must be the same species as the female and bloom at the same time.



Spicebush—*Lindera benzoin*—BF, E, SY

Multi-stemmed, deciduous, understory **shrub**. Subtle yellow blooms along stems in spring. Red berries on female plants in fall. Exudes spicy scent when bark is scratched or leaves are crushed. Height: 8-15'. Spread: 6-15'. **Part shade.** Best in **moist, fertile soil**, but adaptable. **Butterfly plant. Rain garden plant. Deer resistant**, but protect until well-established and sizeable.



Highbush Blueberry—*Vaccinium corymbosum*—E, J

Found in moist woods, bogs and swamps, sometimes in old fields. A multi-stemmed woody shrub with green, or often red, twigs, grows to 12' tall. **Sun to shade in wet to dry, acid, rocky soils to organic peats.** Blooms from April to July, with white, pink or greenish white bell-shaped flowers in drooping clusters produce blue to black edible fruit. These plants are very important to wildlife: **their berries are relished by songbirds, game birds, bear, and small mammals; the twigs and foliage are eaten by deer and rabbits. Flowers attract bees.**



Arrow wood—*Viburnum dentatum (recognitum)*—SY

Found in swamps, boggy woods, swampy pastures, and along streambanks. A 6-8 ft. shrub, sometimes taller, with multiple, erect-arching stems in a loose, round habit. Can grow in **sun to shade in dry to wet acid soils.** Small white, flat-topped flower clusters bloom May-July and are followed by dark blue berries. Dark-green foliage has coarsely toothed leaves and downy twigs. Leaves turn yellow to wine-red in fall. Flood, insect and disease tolerant. Suckers freely from base and transplants well. **Attracts Eastern Bluebird, Northern Flicker, Gray Catbird, and American Robin. Larval host to Spring Azure butterfly.**



Cinnamon Fern—*Osmunda cinnamomea*—J

Native habitat: Boggy areas; shaded ledges; bluffs. Tolerates sun and wet soil, but **prefers part shade and moist acid soil**. The fronds of cinnamon fern occur in groups, rising from shallow, black rootstock. Fertile fronds appear first as silvery, furry fiddleheads, ultimately becoming stiff, erect, and covered with specialized pinnae, turning from green to chocolate brown. Sterile fronds bend outwards forming a vase-shaped circle enclosing the cinnamon fronds. The contrasting stature of fertile and infertile fronds can make for dramatic accents in a landscape.. Fronds are 2-5 ft. in height and often 18 in. in width. **Fuzz which covers the young fiddleheads is a favorite nesting material for birds.**



Christmas Fern—*Polystichum acrostichoides*—J

Native Habitat: Rich, rocky woods; stream banks; swamps; thickets. 1-2 ft. height. Prefers **shade to part shade and cool moist acid humus rich soil** but will tolerate dry rocky sites. Will not tolerate wet soils. It must have good drainage. Gets stressed in too much sun, becoming pale and stunted. It must be kept moist, cool, and shaded. Got its name because it stays green right through the holiday season. It is a leathery fern which has glossy, green fronds year-round. Silvery fiddleheads emerge in early spring. Very easy to establish and grow where conditions are right. Can be a good, evergreen border or accent plant. Often used as a groundcover, however, it is a clumping fern, and does spread or form a continuous carpet the way some ferns do. **Attracts Ruffed Grouse.**



Virginia Creeper—*Parthenocissus quinquefolia*—E, J

A high climbing or trailing woody vine—up to 16'. Leaves are coarsely toothed with pointed tips and in groups of five. **Sun to part sun. Tolerates most soils.** Moderate shade tolerance, high drought tolerance. Blooms with small inconspicuous greenish clustered flowers in June. Produces bluish black fruit and the leaves turn a red, mauve or purple in fall. The plant contains raphides, which irritate the skin of some people. Often found in woods, fields and alluvial thickets.



Switch Grass—*Panicum virgatum*—BF, E

Native Habitat: Sandy shores, open woods, prairies and brackish water. Clump-forming, with much natural color and size variation. Airy, elegant seedheads turn tan in fall. Height: 3-6'. Width: 2-5'. **Sun to part sun. Average medium wet soil.** Divide clumps every 5 years. Use for massing or as a specimen plant in a border. Allow stems to remain up through winter to provide food and cover for birds. Cut back in March. Easy to grow. **Rain garden plant. Deer resistant.**



Lizard's Tail—*Saururus cernuus*—E

Emergent aquatic. Native Habitat: Riverbanks and old fields. Grows 4' tall. Blooms with finger-like flowers in summer. **Grows well in shade to part shade in moist to wet soils and mud.** Can withstand saturated soils of up to 4" flooding. It is a great spreading groundcover for moist soils, shallow water and containers. Good for wetland gardens and habitat. Colonizes large areas. The young shoots and leaves provide forage for cattle and sheep, but when overeaten this plant may be toxic. **Also attracts birds, and is valued by wood ducks.**



Plants marked with an **BF**
Are available at:
Beechwood Farms Nature Reserve
Audubon Center for Native Plants
614 Dorseyville Road,
Fox Chapel Borough Pittsburgh, PA 15238
Phone: 412-963-6100

All plants marked with an **E**
Are available at:
Ernst Conservation Seeds
9006 Mercer Pike Meadville, PA 16335
800-673-3231 OR 814-336-2404
(Sometimes plugs, potted and sometimes by seeds only)

All plants marked with a **PC**
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6482 Galmish Road Cochranton, PA 16314
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1000 Wales Road Erie, PA 16150
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12555 Fry Rd Edinboro, PA 16412
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****REMEMBER plant lists change because of sales and other factors
so contact the Nurseries for availability. **MAKE SURE THE LATIN NAME
IS CORRECT BEFORE YOU BUY THE PLANT!**

The French Creek Watershed

