# Table I-1: Native and Recommended Non-Invasive Plants

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Type	Latin Name	Common Name	National Wetland Indicator *	Hydrologic Zone **	Inundation Tolerance	Drought Tolerance(N=none; L=low; M=medium; H=high)	Salt Tolerance (N=none: L=low; M=medium; H=high; U=unknown)	Mature Canopy Spread	Mature height	Light Requirement	Naivity	Commercial Availability (C=container; P=plug; S=seed	Notes
fern	Adiantum pedatum	maidenhair fern	FAC-	4, 5, 6	no	L	N		1-3'	part shade-full shade	Philadelphia County	С	slightly acidic soils
fern	Dennstaedtia punctilobula	hayscented fern	UPL	4, 5, 6	no	L	U		1-2'	part sun-shade	Philadelphia County	С	groundcover; grows easily in poor soils
fern	Dryopteris marginalis	marginal wood fern	FAC+	4, 5, 6	no	L	U		1-2'	part sun-shade	Philadelphia County	С	evergreen
fern	Onoclea sensibilis	sensitive fern	FACW	(3, 4) 5	saturated	Ν	U		1-2'	sun-shade	Philadelphia County	P,S	groundcover; needs consistent moisture
fern	Osmunda cinnamomea	cinnamon fern	FACW	2 (3, 4)	saturated	М	Ν		2-4'	part-full shade	Philadelphia County	P,S	acidic soils
fern	Osmunda regalis	royal fern	OBL	2 (3, 4)	saturated	L	Ν		2-4'	part-full shade	Philadelphia County	P,S	groundcover; acidic soils
fern	Polystichum acrostichoides	christmas fern	FACU-	6	no	М	U		1-3'	part shade-full shade	Philadelphia County	С	groundcover; evergreen; silvery fiddleheads
fern	Thelypteris noveboracensis	new york fern	FAC	(3, 4) 5	saturated	М	Ν		1-	part shade-shade	Pennsylvania	С	groundcover; delicate fronds spread rapidly in moist areas
forb	Achillea millefolium	yarrow		5,6			Н	2-3'	3'	Full Sun	US		
forb	Acorus americanus	sweet flag	OBL	3, 4	sat, 0-6"	L	М		4'	full sun	Pennsylvania	P,S	occurs in shallow water of ponds
forb	Agastache rupestris	threadleaf giant hyssop	FACU	5,6		М	L	1'	1-2'	Full Sun	US		
forb	Allium cernuum	nodding onion	FACU	5,6		Н	Н	1'	1-2'	Full Sun-Part Shade	US		
forb	Anaphalis margaritacea	pearly everlasting		5, 6	по	М	Ν		1-3'	full sun-part shade	Philadelphia County	S	attractive white, globular flowers
forb	Anemone canadensis	meadow anemone		2,3,4,5			Н	2-3'	1-2'	Full Sun-Part Shade	US		
forb	Aquilegia canadensis	columbine	FAC	(4, 5) 6	no	М	Ν		2'	part sun-shade	Philadelphia County	P,S	flowers with scarlet sepals and yellow petal blades; very adaptable
forb	Asarum canadense	wild ginger	FACU-	4, 5, 6	seasonal	L	Ν		1'	part-full shade	Philadelphia County	P,S	groundcover; semi-evergreen; spreads rapidly; small purple/brown flowers
forb	Asclepias incarnata	swamp milkweed	OBL	2 (3, 4)	sat, 0-6"	Ν	Ν		2-6'	full sun-part shade	Philadelphia County	P,S	pink-rose purple flowers in several umbels
forb	Asclepias syriaca	common milkweed	FACU-	5, 6	no	М	Ν		2-6'	full sun	Philadelphia County	P,S	fragrant brownish-pink flowers in umbels
forb	Asclepias tuberosa	butterfly-weed		5, 6	no	Н	Ν		2-3'	full sun	Philadelphia County	P,S	bright orange flowers in umbels
forb	Baptisia australis	blue false indigo	1	4, 5, 6	seasonal	Н	Ν		3-6'	full sun	Pennsylvania	P,S	showy blue flowers; shrub-like; nitrogen fixer; adaptable
forb	Baptisia tinctoria	wild indigo		5, 6	no	Н	N		2-3'	full sun-part shade	Philadelphia County	P,S	sandy, acidic soils; yellow pea-like flowers; dark blue-green leaves
forb	Bidens aristosa	tickseed sunflower	FACW-	4, 5, 6	seasonal	L	N		1-3'	full sun	US	S	daisy-like yellow flower
forb	Bidens cernua	bur marigold	OBL	3, 4, 5	saturated	L	Ν		1-3'	full sun	Philadelphia County	S	many flowers crowded together into a head
forb	Bidens frondosa	beggars-ticks	FACW	5, 6	no	L	N		1-4'	full sun	Philadelphia County	S	orange flowers; adaptable
forb	Boltonia asteroides	white doll's daisy	FACW	2,3,4,5	Seasonal	Н	L	2-4'	2-6'	Full Sun	US		
forb	Caltha palustris	marsh marigold	OBL	2, 3, 4	sat, 0-6"	Ν	Ν		1-2'	full sun-part shade	Philadelphia County	P,S	ideal for wetland gardens; clump-forming
forb	Chamaecrista fasciculata	partridge-pea	FACU	4, 5, 6	no	М	L		to 3'	full sun	Philadelphia County	s	showy yellow flowers; found on stream banks
forb	Chelone glabra	white turtlehead	OBL	3, 4, 6	seasonal	L	N		2-3'	full sun-part shade	Philadelphia County	P,S	snapdragon-type white flowers
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forb	Chrysogonum virginianum	green and gold		6	no	Ν	N		1'	part shade	Pennsylvania	P,S	groundcover; golden daisy-like flowers continue until frost; spreads easily
forb	Cimicifuga racemosa	black snakeroot		4, 5, 6	seasonal	L	N		3-8'	full sun-part shade	Pennsylvania	С	woodland edge plant; white, wand-like blooms
forb	Coreopsis grandiflora/lanceolata/ verticillata	tickseed	N/A	5,6		Н	Н	1-3'	1-3'	Full Sun	US		
forb	Dicentra eximia	wild bleeding heart		5, 6	no	L	N		1.5'	part shade-shade	Pennsylvania	С	mound of finely-cut foliage; delicate pink hearts
forb	Dodecatheon media	shooting star	FACU	5, 6	no	L	N		1-2'	part shade	Philadelphia County	С	nodding white, pink, or lilac flowers in a terminal umbel
forb	Echinacea purpurea	eastern purple coneflower	N/A	2,3,4,5	Seasonal	L	L	1-2'	2-5'	Full Sun-Part Shade	US		
forb	Eupatorium coelestinum	mist flower	FAC	4, 5, 6	seasonal	М	N		2'	full sun-part shade	Pennsylvania	P,S	groundcover; blue flowers on neat foliage; spreads easily
forb	Eupatorium fistulosum	joe-pye-weed	FACW	(3, 4) 5	seasonal	L	N		to 10'	sun-shade	Philadelphia County	S	many white flowers in large, branching clusters
forb	Eupatorium hyssopifolium	hyssopleaf thoroughwort		5, 6	no	М	М		1-4'	full sun-part shade	Philadelphia County	P,S	white flowers in flat-topped terminal clusters
forb	Eupatorium maculatum	spotted joe-pye-weed	FACW	(3, 4) 5	seasonal	L	N		to 5'	full sun-part shade	Pennsylvania	P,S	light purple flowers; attracts butterflies
forb	Eupatorium perfoliatum	boneset	FACW+	(2, 3) 4	seasonal	L	U		2-5'	full sun-part shade	Philadelphia County	P,S	clusters of grayish-white flowers
forb	Eupatorium purpureum	joe-pye-weed	FAC	3 (4, 5)	seasonal	L	U		6-8'	full sun-part shade	Philadelphia County	P,S	vanilla-scented flowers
forb	Eupatorium rugosum	white snakeroot		5, 6	no	М	М		1-5'	sun-shade	Philadelphia County	P,S	white flowers in large clusters
forb	Eurybia divaricata	white wood aster		4 (5,6)	no	М	L		1-3'	part-full shade	Philadelphia County	P,S	white rays, center yellow and reddish-purple
forb	Filipendula rubra	queen of the prairie	FACW	4, 5, 6	seasonal	N	U		4-6'	full sun-part shade	Pennsylvania	S	prefers well-drained moist soils; foamy clusters of blooms
forb	Gaillardia aristata, x grandiflora	blanketflower	N/A	5,6		М	Н	1'	1-3'	Full Sun	US		
forb	Geranium maculatum	wild geranium	FACU	4,5,6		Н	Н	1-2'	1-2'	Full Sun-Part Shade	US		
forb	Helenium autumnale	sneezeweed	FACW+	3, 4, 5	seasonal	L	N		3-5'	full sun-part shade	Philadelphia County	P,S	showy yellow daisy-like flowers; moist meadows; stream banks
forb	Helianthus angustifolius	swamp sunflower	FACW	3, 4, 5	seasonal	М	N		6-8'	full sun	Pennsylvania	S	yellow flowers with maroon centers
forb	Helianthus giganteus	swamp sunflower	FACW	3, 4, 5	seasonal	L	N		5-10'	full sun-part shade	Philadelphia County	S	yellow flowers on red-purple stems
forb	Heliopsis helianthoides	ox-eye		3, 4, 5, 6	seasonal	М	U		2-5'	full sun-part shade	Philadelphia County	P,S	pale yellow cone-shaped rays with yellow disks
forb	Heuchera americana	alumroot		5, 6	no	М	U		1- 1.5'	full sun-part shade	Philadelphia County	P,S	groundcover; white airy flowers
forb	Hibiscus moscheutos	swamp mallow	OBL	2, 3	sat, 0- 12"	N	М		3-7'	full sun-part shade	Philadelphia County	P,S	large pink, purplish, or white flowers with a dark center
forb	Houstonia caerulea	bluets	FACU	5, 6	no	М	U		2-8"	full sun-part shade	Philadelphia County	s	delicate pale blue flowers with yellow centers
forb	Iris versicolor	blue-flag iris	OBL	2 (3, 4)	sat, 0-6"	N	L		1-3'	full sun	Philadelphia County	P,S	blue-violet flowers
forb	Liatris spicata	spiked gay-feather	FAC+	4, 5	seasonal	L	L		4-5'	full sun	Philadelphia County	P,S	easy to grow; tall spikes of lavender blooms
forb	Lillium superbum	turk's cap-lily	FACW+	4, 5	seasonal	N	U		3-8'	full sun	Philadelphia County	s	nodding flowers, orange or orange-red with spots
forb	Lobelia cardinalis	cardinal flower	FACW+	3, 4	saturated	М	N		2-5'	part-full shade	Philadelphia County	P,S	brilliant scarlet red flowers
forb	Lobelia siphilitica	great-blue lobelia	FACW+	3, 4	saturated	Ν	U		1-3'	full sun-part shade	Philadelphia County	P,S	blue-white flowers
forb	Maianthemum racemosum	false-solomon's seal		5, 6	no	L	U		1-3'	shade	Philadelphia County	С	creamy-white flowers in branched, pyramidal clusters
forb	Mertensia virginica	virginia bluebells	FACW	5, 6	no	L	Ν		1-2'	full-part shade	Philadelphia County	С	woodland flower; entire plant dies back by mid-summer
forb	Mimulus ringens	allegheny monkey-flower	OBL	3, 4	saturated	Ν	U		1-3'	full sun-part shade	Philadelphia County	Р	blue-violet flowers
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forb	Monarda didyma	bee-balm	FAC+	(4, 5) 6	no	Ν	U		2-5'	full sun	Philadelphia County	С	red flowers, scented leaves
forb	Monarda fistulosa	wild bergamot	UPL	5, 6	по	N	L		2-4'	full sun-part shade	Philadelphia County	P,S	pink to lavender flowers, scented leaves
forb	Monarda punctata	horsemint	UPL	6	по	М	U		2-3'	full sun	Pennsylvania	P,C	pink, showy bracts and yellow flowers with purple spots
forb	Oenothera fruticosa	sundrops	FAC	5, 6	no	L	Н		1-2'	full sun	Philadelphia County	P,S	bright yellow flowers in spike or racemes
forb	Peltandra virginica	arrow-arum	OBL	(1, 2) 3	sat, 0-1'	N	L		1-2'	full sun	Philadelphia County	P,S	emergent aquatic; resembles an arrowhead
forb	Penstemon digitalis	white beardtongue	FAC	5, 6	no	Н	М		2-4'	full sun-part shade	Philadelphia County	P,S	white with purple tinged tubular flowers
forb	Phlox maculata	wild sweet-william	FACW	4, 5	seasonal	М	Ν		1-3'	full sun	Philadelphia County	P,S	deep pink to rose-purple flower clusters
forb	Phlox paniculata	summer phlox	FACU	4, 5, 6	no	М	U		2-6'	full sun-part shade	Philadelphia County	Р	magenta pink flower clusters
forb	Phlox subulata	moss phlox	1	6	no	М	N		3-5"	full sun-part shade	Pennsylvania	С	groundcover; evergreen; forms mats; good for hillsides and rocky areas
forb	Physostegia virginiana	obedient plant	FAC+	4, 5	seasonal	L	U		1-5'	full sun-part shade	Philadelphia County	P,S	tall graceful plant with pink tubular flowers; very tolerant
forb	Polygonatum biflorum	solomon's seal	FACU	5, 6	no	L	U		1-3'	full-part shade	Philadelphia County	С	greenish bell-shaped flowers hang from leaf axils in pairs
forb	Polygonum pensylvanicum	pennsylvania smartweed	FACW	2 (3, 4)	sat, 0-6"	М	L		to 6'	full sun	Pennsylvania	s	attractive pink flowers; great species for disturbed sites and stream banks
forb	Pontederia cordata	pickerel-weed	OBL	(2, 3) 4	saturated	Ν	L		1-3'	full sun	Philadelphia County	P, C	heart-shaped leaves with purple flowers in a spike
forb	Pycnanthemum virginianum	virginia mountainmint	FAC	2,3,4,5	Seasonal	М	L	2'	2-3'	Full Sun	US		
forb	Ruellia humilis	fringeleaf wild petunia	FACU	5,6		Н	L	1-2'	1-2'	Full Sun-Part Shade	US		
forb	Rudbeckia fulgida	early coneflower	FAC	5, 6	no	М	U		1.5'	full sun-part shade	Pennsylvania	P,S	yellow flowers with black eyes
forb	Rudbeckia hirta	black-eyed susan	FACU-	4, 5, 6	no	М	Ν		1-3'	full sun-part shade	Pennsylvania	P,S	flowers from seed in the first year
forb	Rudbeckia laciniata	tall coneflower	FACW	4, 5	seasonal	Н	Ν		5-10'	full sun-part shade	Pennsylvania	P,S	yellow flowers with drooping rays and green eyes; moist thickets; swamps
forb	Rudbeckia triloba	three-lobed coneflower	FACU	5, 6	no	М	U		1-3'	full sun-part shade	Pennsylvania	P,S	yellow flowers with large, black eyes; moist to dry soils
forb	Sagittaria latifolia	arrowhead	OBL	1, 2, 3	sat, 0-2'	Ν	Ν		1-4'	full sun	Philadelphia County	P,S	emergent aquatic, tubers are edible
forb	Saururus cernuus	lizard's tail	OBL	2, 3, 4	sat, 0-1'	N	U		2-4'	sun-part shade	Philadelphia County	P,S	emergent aquatic, fragrant white flowers
forb	Sedum ternatum	wild stone crop		6	no	М	U		3-8"	Full sun-part shade	Philadelphia County	P,S	groundcover, like rocky banks
forb	Sedum x	stone crop	N/A	4,5,6	Seasonal	Н	Н	1-2'	1-2'	Full Sun	US		pink bloom color
forb	Senecio aureus	golden ragwort	FACW	4, 5	seasonal	L	N		1-3'	sun-shade	Philadelphia County	P,S	groundcover; flowers in terminal clusters with many golden rays
forb	Solidago bicolor	silver-rod		5, 6	no	М	U		1-3'	part sun	Philadelphia County	S	only native white goldenrod
forb	Solidago nemoralis	gray goldenrod	1	6	no	М	N		1-3'	full sun-part shade	Philadelphia County	S	dry, sterile soils; yellow flower clusters
forb	Solidago odora	sweet goldenrod		6	no	М	U		2-4'	full sun-part shade	Philadelphia County	s	leaves smell and taste like licorice
forb	Solidago rugosa	wrinkle-leaf goldenrod	FAC	3, 4, 5	по	М	N		3-7'	sun-part shade	Philadelphia County	P,S	yellow flowers
forb	Solidago sempervirens	sea-side goldenrod	FACW	3, 4, 5	seasonal	Н	М		3-5'	full sun	Philadelphia County	P,S	showy yellow flowers
forb	Symphyotrichum cordifolius	blue wood aster		5, 6	no	М	L		1.5- 4'	part-full shade	Philadelphia County	P,S	blue-violet to rose disk and ray flowers
forb	Symphyotrichum novae-angliae	new england aster	FAC	(3, 4) 5	seasonal	М	L		2-8'	full sun-part shade	Philadelphia County	P,S	rays bright pink or purple
forb	Symphyotrichum novi-belgii	new york aster	FACW+	(3, 4) 5	seasonal	L	N		1-4'	full sun	Philadelphia County	P,S	violet to blue rays with yellow disks
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forb	Tiarella cordifolia	foamflower	FAC-	5, 6	no	L	U		1'	part sun-full shade	Pennsylvania	P,S	groundcover; spreads rapidly; leaves are evergreen; flowers are small and white
forb	Tradescantia virginiana	spiderwort	FACU	5, 6	no	М	N		1-3'	full sun-part shade	Philadelphia County	P,S	long blooming; deep blue-purple or white flower; dry to moist soils
forb	Vallisneria americana	wild celery	OBL	1	sat, 1' min.	N	N		1'	full sun-part shade	Pennsylvania	С	tolerant of murky water and high nutrient loads
forb	Verbena hastata	blue vervain	FACW+	3,4	saturated	N	U		2-6'	full sun	Philadelphia County	P,S	violet blue flowers in erect spikes
forb	Veronia novaborescensis	new york ironweed	FACW+	3, 4	saturated	М	Ν		5-6'	full sun	Philadelphia County	P,S	30-50 small rose-purple flowers on a head
forb	Zizia aurea	golden zizia	FAC	5, 6	no	L	Н		2-3'	full sun-part shade	Philadelphia County	С	umbels of yellow flowers; all leaves are compound
grass	Andropogon gerardii	big bluestem	FACW+	(4, 5) 6	no	Н	L		3-6'	full sun	Philadelphia County	P,S	warm-season grass
grass	Andropogon virginicus	broom sedge	FACU	5, 6	no	Н	Ν		3-8'	full sun-part shade	Philadelphia County	P,S	warm-season grass
grass	Chasmanthium latifolium	river oats	FACU	4, 5	seasonal	М	Ν		2-3'	full sun-part shade	Pennsylvania	P,S	groundcover; resembles bamboo; dangling "oats"
grass	Danthonia spicata	poverty grass		6	no	L	U		1-3'	full sun	Pennsylvania	P,S	usually found in poor, dry soils; very tolerant; cool-season
grass	Distichlis spicata	seashore saltgrass	FACW+	5, 6	no	М	Н		1'	full sun	Philadelphia County	P,S	especially useful in saline wetlands; dense roots act as a pollutant filter
grass	Eleocharis palustris	creeping spike-rush	OBL	2, 3, 4	sat, 0-6"	L	L		1-2'	full sun	Pennsylvania	P,S	forms dense tufts; roots fix nitrogen; important food and cover for waterfowl
grass	Elymus canadensis	canada rye	FACU+	4, 5, 6	seasonal	М	М		3-6'	full sun-part shade	Philadelphia County	s	cool season, clump-forming grass with wheat-like spikes that remain until winter
grass	Elymus virginicus	virginia wild rye	FACW-	4, 5	seasonal	М	Ν		2-3'	part shade-shade	Philadelphia County	P,C	spreads easily; good for erosion control; very tolerant
grass	Eragrostis spectabilis	purple lovegrass	UPL	5, 6	no	Н	N		1- 2.5'	full sun	Philadelphia County	P,S	groundcover; delicate purple flowers seem to float above the plant
grass	Glyceria grandis	american mannagrass	OBL	2, 3, 4	seasonal	Ν	U		to 5'	full sun	Philadelphia County	s	decorative cool-season bunchgrass; purple seed heads
grass	Glyceria striata	fowl mannagrass	OBL	(2, 3) 4	seasonal	L	Ν		2-4'	full sun-part shade	Philadelphia County	P,S	clump forming
grass	Hordeum jubatum	foxtail barley	FAC	5, 6	no	М	М		1-3'	full sun	Philadelphia County	S	soft and airy appearance; compaction resistant; often found on roadsides
grass	Leersia oryzoides	rice cutgrass	OBL	(2, 3) 4	sat, 0-6"	L	Ν		2-5'	full sun	Philadelphia County	P,S	single flower clusters slightly drooping
grass	Panicum dichotomiflorum	smooth panic-grass	FACW-	4, 5, 6	seasonal	Ν	М		5-7'	full sun-part shade	Philadelphia County	S	green or purple inflorescence
grass	Panicum virgatum	switch-grass	FAC	(4, 5) 6	seasonal	М	М		3-6'	full sun-part shade	Philadelphia County	P,S	groundcover; bluish-green foliage; purple panicle of flowers
grass	Schizachyrium scoparium	little bluestem	FACU	6	no	Н	Ν		2-3'	full sun	Philadelphia County	P,S	warm-season grass, tolerates poor, dry soils
grass	Sorghastrum nutans	indian grass	UPL	5, 6	no	М	М		5-7'	full sun	Philadelphia County	P,S	warm-season grass
grass	Sporobolus heterolepis	prairie dropseed	UPL	4,5,6	Seasonal	L	L	2-3'	2-4'	Full Sun	US		
grass	Tridens flavus	purpletop	FACU	6	no	Н	N		2-5'	full sun	Philadelphia County	P,S	groundcover; purple drooping branches
grass	Typha angustifolia	narrow-leaved cattail	OBL	1 (2, 3)	sat, 0-1'	L	М		to 6'	full sun	Pennsylvania	P,S	provides food and cover for geese, ducks, and spawning fish
grass	Typha latifolia	broad-leaved cattail	OBL	1, 2, 3	sat, 0-1'	N	L		to 10'	full sun-part shade	Pennsylvania	P,S	provides food and cover for geese, ducks, and spawning fish
grass	Zizania aquatica	wild rice	OBL	2, 3, 4	saturated	N	L		to 9'	full sun	Philadelphia County	S	yellow-red edible grains; found in tidal and non-tidal marshes; requires still water
grass- like	Alisma subcordatum	southern water-plantain	OBL	2	sat, 0-1'	N	N		to 4'	full sun	Philadelphia County	S	emergent aquatic, slow moving water
grass- like	Carex crinita	finged sedge	OBL	2 (3, 4)	saturated	L	N		to 4'	full sun-part shade	Philadelphia County	P,C	groundcover; emergent aquatic, distinctive sedge
grass- like	Carex lurida	lurid sedge	OBL	2, 3, 4	saturated	L	N		to 3'	full sun-part shade	Philadelphia County	P, C	seed heads resemble small sweetgum fruits; remains attractive in warm temps
grass- like	Carex pensylvanica	pennsylvania sedge		5, 6	seasonal	М	N		3- 15"	part-full shade	Philadelphia County	P,C	slow-spreading
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Type	Latin Nane	Common Name	National Wetland Indicator *	Hydrobgic Zone **	Inudation Tolerance	Drought Tolerance(N=none; L=low; M=medium; H=high)	Salt Tolennce (N=none; L=low; M=medium; H=high; U=unknown)	Mature Canopy Spread	Maure height	Ligh Requirement	Nativity	Commercial Availability (C=container; P=plug; S=seed	Nates
grass- like	Carex scoparia	broom sedge	FACW	3 (4) 5	sat, 0-6"	N	L		1-3'	full sun	Philadelphia County	P,S	green flowers in clusters at the top of the stem
grass- like	Carex stricta	tussock sedge	OBL	1 (2, 3) 4	sat, 0-6"	L	Ν		to 3'	full sun	Philadelphia County	P,C	emergent aquatic
grass- like	Carex vulpinoidea	fox sedge	OBL	1, 2 (3) 4	sat, 0-6"	L	Ν		to 3'	full sun-part shade	Philadelphia County	P,C	seed heads resemble a fox's tail
grass- like	Juncus effusus	soft rush	FACW+	(2, 3) 4	sat, 0-1'	М	L		2-3'	full sun	Philadelphia County	P,C	clump forming
grass- like	Juncus gerardii	black-grass	FACW+	3, 4	sat, 0-6"	N	Н		1-2'	full sun-part shade	Philadelphia County	P,C	purplish to burgundy flower clusters
grass- like	Pontederia cordata	pickerel-weed	OBL	1, 2, 3	sat, 0-1'	Ν	L		1-3'	full sun	Philadelphia County	s	emergent aquatic, heart-shaped leaves, purple flowers
grass- like	Schoenoplectus (Scirpus) pungens	three-square	FACW+	2, 3, 4	sat, 0-6"	N	Н		1-3'	full sun	Philadelphia County	P,S	good bank stabilizer; erosion control; spreads easily
grass- like	Scirpus cyperinus	wool-grass	FACW+	2 (3, 4)	saturated	L	Ν		to 6'	full sun	Philadelphia County	P,C	forms dense tussocks; large inflorescence
grass- like	Scirpus polyphyllus	bulrush	OBL	2, 3, 4	saturated	N	U		to 4'	shade	Philadelphia County	S	numerous leaves along stem, flowers at the top of the stem
grass- like	Sparganium americanum	bur-reed	OBL	(2, 3) 4	sat, 0-6"	N	Ν		1-3'	full sun	Philadelphia County	P,C	emergent aquatic
grass- like	Sparganium eurycarpum	giant bur-reed	OBL	1 (2, 3)	sat, 0- 12"	N	Ν		2-4'	full sun	Philadelphia County	P,C	emergent aquatic
shrub	Alnus serrulata	smooth alder	OBL	(1, 2) 3	sat, 0-3"	L	Ν	6-10'	6-10'	full sun	Philadelphia County	С	stabilizes stream banks, roots fix nitrogen
shrub	Amelanchier canadensis	serviceberry	FAC	4, 5, 6	seasonal	L	Н	15- 20'	6-20'	full sun-part shade	Philadelphia County	С	compaction sensitive
shrub	Aronia arbutifolia	red chokeberry	FACW	3 (4, 5)	seasonal	L	М	3-4'	6-10'	full sun-part shade	Philadelphia County	С	compaction resistant, bank stabilizer, white flowers
shrub	Aronia melanocarpa	black chokeberry	FAC	3 (4, 5)	seasonal	М	М	3-6'	5-10'	full sun-part shade	Philadelphia County	С	compaction tolerant, white flowers
shrub	Baccharis halimifolia	groundsel-tree	FACW	4, 5, 6	seasonal	L	М	6-12'	6-12'	full sun	Philadelphia County	С	compaction resistant
shrub	Cephalanthus occidentalis	buttonbush	OBL	1 (2, 3)	sat, 0-3'	М	М	4-8'	3-6'	full sun	Philadelphia County	С	compaction tolerant, interesting flowers
shrub	Chionanthus virginicus	fringetree	FAC+	4, 5	seasonal	М	Ν	12- 20'	12- 25'	sun-shade	Philadelphia County	С	white, pendulous, fragrant flowers; gold fall color; very adaptable; acidic soils
shrub	Clethra alnifolia	sweet pepperbush	FAC+	3, 4, 5	seasonal	L	М	4-6'	3-8'	full sun-shade	Philadelphia County	С	compaction tolerant, acidic soils
shrub	Comptonia peregrina	sweet-fern		6	no	Н	Ν	4-8'	2-5'	full sun-part shade	Pennsylvania	С	very adaptable; aromatic leaves; nitrogen fixer
shrub	Cornus amomum	silky dogwood	FACW	(3, 4) 5	seasonal	L	Ν	8'	6-10'	full sun-part shade	Philadelphia County	С	compaction tolerant, bank stabilizer, white flowers
shrub	Cornus racemosa	gray dogwood	FAC-	3 (4, 5)	seasonal	М	Ν	10- 15'	10- 15'	full sun-shade	Philadelphia County	С	compaction tolerant, very adaptable, white flowers
shrub	Cornus sericea	red-osier dogwood	FACW+	(3, 4) 5	seasonal	L	Ν	8-12'	7-9'	full sun	Philadelphia County	С	compaction tolerant, stream bank stabilizer, red bark
shrub	Corylus americana	hazelnut	FACU-	4 (5, 6)	no	М	Ν	8-13'	8-10'	full sun-light shade	Philadelphia County	С	compaction tolerant, edible nuts
shrub	Dasiphora fruticosa	bush cinquefoil	N/A	4,5,6	Seasonal	Н	Н	3-5'	2-4'	Full Sun-Part Shade	US		
shrub	Diervilla lonicera	northern bush honeysuckle	N/A	Outer		Н	L	1-4'	1-4'	Full Sun-Part Shade	US		
shrub	Euonymus americanus	hearts-a-burstin'	FAC	4, 5, 6	seasonal	Ν	Ν	4-6'	4-6'	full sun-part shade	Philadelphia County	С	small brown flowers; fuchsia hearts; green stems add winter interest
shrub	Hamamelis virginiana	witch-hazel	FAC-	4 (5, 6)	no	L	Ν	15- 20'	20- 30'	full sun-shade	Philadelphia County	С	ornamental, unusual yellow flowers
shrub	Hydrangea arborescens	wild hydrangea	FACU	3, 4, 5	no	N	U	3-5'	3-5'	part-full shade	Philadelphia County	P,S	creamy white flowers; dry to moist soil
shrub	Hypericum densiflorum, prolificum	st.john's wort	FACW	2,3,4,5	Seasonal	L	High	1-5'	1-6'	Full Sun-Part Shade	US		
shrub	Ilex verticillata	winterberry	FACW+	(3, 4) 5	seasonal	L	Ν	3-12'	6-12'	full sun-part shade	Philadelphia County	С	compaction resistant, red berries persist through winter
shrub	Itea virginica	virginia sweet spire	OBL	3, 4, 5	seasonal	L	Ν	3-5'	3-9'	sun-shade	Pennsylvania	С	fragrant white tassels; good fall color
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Type	Latin Nane	Common Name	National Wetland Indicator *	Hydrologic Zone **	Inundation Tolerance	Drought Tolerance(N=none; L=low; M=medium; H=high)	Salt Tolerance (N≕none: L=low; M=medium; H=high; U=unknown)	Mature Canopy Spread	Maure height	Light Requirement	Nativity	Commercial Availability (C=container; P=plug; S=seed	Naes
shrub	Juniperus communis	juniper		6	no	Н	N	7-13'	5-10'	full sun	Philadelphia County	С	mounded shrub; deep taproot; high wildlife value; evergreen
shrub	Leucothoe racemosa	swamp sweetbells	FACW	3, 4, 5	seasonal	L	L	3-8'	3-8'	part-full shade	Pennsylvania	С	white drooping flowers; evergreen leaves; moist soil
shrub	Lindera benzoin	spicebush	FACW-	3, 4, 5	seasonal	L	М	6-12'	6-12'	full sun-shade	Philadelphia County	С	compaction tolerant, drought sensitive
shrub	Lonicera sempervirens	trumpet honeysuckle	FACU	6	no	L	N	3-6'	10- 20'	full sun-part shade	Philadelphia County	P,S	vine with bright orange trumpet-shaped flowers; flood intolerant
shrub	Myrica pensylvanica	bayberry	FAC	(3, 4) 5	seasonal	Н	М	5-9'	9'	full sun	Philadelphia County	С	compaction resistant, roots fix nitrogen, winter fruits
shrub	Parthenocissus quinquefolia	virginia creeper	FACU	4, 5, 6	seasonal	Н	М	5-10'	30- 50'	full sun-part shade	Philadelphia County	С	very adaptable vine; compaction resistant; beautiful red fall color
shrub	Physocarpus opulifolius	ninebark	FACW	3, 4, 5	seasonal	Н	Ν	4-6'	5-10'	full sun	Philadelphia County	С	compaction resistant
shrub	Rhododendron maximum	rosebay	FAC	3, 4, 5	seasonal	Н	Ν	4-25'	4-25'	full sun-part shade	Philadelphia County	С	acidic soil, compaction sensitive
shrub	Rhododendron periclymenoides	pinxterbloom azalea	FAC	4, 5, 6	seasonal	М	N	4-7'	4-6'	full sun-part shade	Philadelphia County	С	pink flowers open before leaves are out; moist, acid, well-drained soil
shrub	Rhododendron viscosum	swamp azalea	FACW+	(3, 4) 5	saturated	М	Ν	6-12'	5-8'	full sun-part shade	Philadelphia County	С	compaction resistant, showy pink and white flowers
shrub	Rhus aromatica	fragrant sumac		5, 6	no	М	U	6-10'	2-4'	full sun-part shade	Pennsylvania	С	spicy smelling leaves; good fall color
shrub	Rhus copallina	winged sumac		6	по	Н	М	10- 20'	7-15'	full sun	Philadelphia County	С	compaction sensitive; flood intolerant
shrub	Rhus glabra	smooth sumac		4 (5, 6)	по	М	N	9-15'	9-15'	full sun	Philadelphia County	С	grows well in poor soils; flood and compaction intolerant
shrub	Rhus typhina	staghorn sumac		6	no	Н	М	15- 25'	15- 25'	full sun	Philadelphia County	С	flood intol., compaction sensitive
shrub	Rosa carolina	pasture rose	UPL	5, 6	по	Н	М	5-10'	4-6'	full sun	Philadelphia County	С	compaction tolerant; flood intolerant
shrub	Rosa palustris	swamp rose	OBL	2 (3, 4)	saturated	L	Ν	4-6'	6'	full sun	Philadelphia County	С	easy to establish
shrub	Rosa virginiana	wild rose	FAC	3 (4, 5)	seasonal	L	Ν	3-5'	4-6'	full sun	Philadelphia County	С	very pretty; low maint; tolerant of poor soils
shrub	Rubus allegheniensis	common blackberry	FACU-	4, 5, 6	no	Н	Ν	6-12'	3-6'	full sun-part shade	Philadelphia County	С	compaction tolerant; edible fruit
shrub	Rubus occidentalis	blackcap raspberry		6	no	М	Ν	5-11'	3-4'	full sun-part shade	Pennsylvania	С	tasty fruits; purple & white stems provide winter interest; forms thickets
shrub	Salix discolor	pussy-willow	FACW	3, 4, 5	seasonal	L	Ν	10- 12'	10- 15'	full sun	Philadelphia County	С	compaction resistant, roots easily from cuttings
shrub	Salix exigua	sandbar willow	OBL	3, 4, 5	seasonal	М	L	10- 15'	10'	full sun	Philadelphia County	С	found on sandy, gravelly bars or shores
shrub	Salix sericea	silky willow	OBL	3, 4, 5	seasonal	L	Ν	10- 15'	10'	full sun-part shade	Philadelphia County	С	found in swamps, bogs, and on stream banks
shrub	Sambucus canadensis	american elder	FACW	(3, 4) 5, 6	seasonal	М	М	5-12'	5-12'	full sun-shade	Philadelphia County	С	compaction resistant
shrub	Spiraea alba var. latifolia, latifolia	white meadowsweet	FAC+	2,3,4,5,6	Seasonal	Н	L	3-4'	3-5'	Full Sun	US		
shrub	Spiraea tomentosa	steeplebush	FACW-	4, 5, 6	seasonal	М	N	3-6'	3-6'	full sun	Philadelphia County	С	compaction resistant
shrub	Vaccinium angustifolium	low-bush blueberry	FACU-	4, 5, 6	seasonal	Н	Ν	2'	1-3'	full sun-part shade	Philadelphia County	С	compaction sensitive; very sweet berries; very flood tolerant; needs acidic soil
shrub	Vaccinium corymbosum	highbush blueberry	FACW-	3, 4, 5, 6	seasonal	L	Н	8-12'	6-12'	full sun-part shade	Philadelphia County	С	compaction resistant, acidic soils
shrub	Vaccinium pallidum	early low blueberry	FACU-	4, 5, 6	seasonal	Н	U	2-3'	1-3'	full sun-part shade	Philadelphia County	С	white flowers; sweet edible fruit; wildlife value; compaction sensitive, very flood tol
shrub	Vaccinium stamineum	deerberry	FACU	6	no	Н	Ν	5-10'	5-10'	full sun-part shade	Pennsylvania	С	white flowers; edible fruit; high wildlife value; dry to moist soil
shrub	Viburnum acerifolium	maple-leaved viburnum	UPL	5, 6	no	Н	N	2-4'	4-6'	full sun-part shade	Philadelphia County	С	creamy white flowers; blue berries; dry to moist soil; wildlife value
shrub	Viburnum dentatum	southern arrow-wood	FAC	3 (4, 5)	seasonal	М	М	6-12'	6-12'	full sun-part shade	Philadelphia County	С	compaction tolerant; heat resistant
shrub	Viburnum lentago	nannyberry	FAC	4, 5, 6	no	Н	Ν	6-12'	15- 18'	full sun-part shade	Philadelphia County	С	white flowers; sweet black berries; very adaptable; high wildlife value
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Type	Latin Name	Common Name	National Wetland Indicator *	Hydrobgic Zone **	Inudation Tolerance	Drought Tolerance(N=none; L=low; M=nedium; H=high)	Salt Tolerance (N=none; L=low; M=medium; H=high; U=unknown)	Mature Canopy Spread	Mature height	Light Requirement	Nativity	Commercial Availability (C=container; P=plug; S=seed	Naes
shrub	Viburnum nudum	possum haw	OBL	3, 4, 5	seasonal	L	N	12- 20'	12- 20'	full sun-part shade	Philadelphia County	С	white flowers; glossy leaves; high wildlife value; compaction resistant
shrub	Viburnum prunifolium	black haw	FACU	4, 5, 6	no	М	Ν	6-12'	15- 20'	full sun-part shade	Philadelphia County	С	white flowers; black berries; very adaptable; high wildlife value
shrub	Viburnum trilobum	american cranberry	FACW	3, 4, 5	seasonal	М	N	8-12'	8-12'	full sun-part shade	Philadelphia County	С	white flowers; edible red berries; moist to boggy soil; high wildlife value
tree	Acer rubrum	red maple	FACW	3 (4, 5)	seasonal	L	N	30- 50'	40- 60'	sun-shade	Philadelphia County	С	tolerant of many soils, tolerates acidic soil, rapid growth; suitable street tree
tree	Acer saccharinum	silver maple	FACW	3 (4, 5)	seasonal	L	N	35- 70'	50- 70'	full sun-part shade	Philadelphia County	С	very tolerant of poor soils
tree	Acer saccharum	sugar maple	FACU	4, 5, 6	no	М	N	30- 60'	60- 75'	full sun-part shade	Philadelphia County	С	intolerant of crowding, pollution, and drought
tree	Amelanchier laevis	smooth serviceberry		4, 5, 6	seasonal	М	М	15- 40'	25'	full sun-part	Philadelphia County	С	compaction sensitive
tree	Asimina triloba	paw paw	FACU+	4, 5, 6	no	L	N	15- 30'	15-	shade full sun-part	Philadelphia County	С	unusual maroon flower; very large leaves; moist soil; compaction sensitive
tree	Betula lenta	sweet birch	FACU	4, 5, 6	seasonal	М	N	40-	20' 40-	shade full sun-part	Philadelphia County	С	sensitive to soil compaction
tree	Betula nigra	river birch	FACW	(3, 4) 5	seasonal	L	Ν	60' 40-	55' 40- 70'	shade full sun	Philadelphia County	С	good bank stabilizer; acidic soils
tree	Betula populifolia	gray birch	FAC	(4, 5) 6	seasonal	М	N	60' 10- 20'	70' 20- 40'	full sun	Philadelphia County	С	poor soils, short lived tree, early successional species
tree	Carpinus caroliniana	hornbeam	FAC	3 (4, 5) 6	seasonal	L	N	20' 20- 35'	50- 75'	heavy shade	Philadelphia County	С	compaction sensitive
tree	Carya cordiformis	bitternut hickory	FACU+	5, 6	seasonal	Н	Ν	50- 75'	50- 75'	full sun-part	Philadelphia County	С	dry, moist, or wet soil; high wildlife value; good fall color; compaction tolerant
tree	Carya glabra	pignut hickory	FACU-	4 (5, 6)	no	Н	N	35- 50'	50- 60'	shade full sun-part shade	Philadelphia County	С	compaction sensitive, warm south-facing slopes
tree	Carya ovata	shagbark hickory	FACU	4 (5, 6)	no	М	N	50- 70'	75- 100'	full sun-part shade	Philadelphia County	С	compaction tolerant, distinctive peeling bark
tree	Celtis occidentalis	hackberry	FACU	4, 5, 6	no	Н	М	40- 60'	40- 60'	full sun-part shade	Philadelphia County	С	fruit persists into winter; deep-rooting; good street tree
tree	Cercis canadensis	eastern redbud	FACU-	4, 5, 6	no	Н	Ν	25- 35'	20- 30'	full sun-part shade	Philadelphia County	С	not good in acidic soils; nitrogen fixer
tree	Chamaecyparis thyoides	atlantic white cedar	OBL	(1, 2) 3, 4	saturated	N	N	20'	50'	part sun-shade	Pennsylvania	С	usually found in areas with fluctuating water tables
tree	Cornus florida	flowering dogwood	FACU-	4, 5, 6	no	М	N	15- 30'	30- 50'	sun-shade	Philadelphia County	С	understory tree; nice ornamental
tree	Crataegus crus-galli	cockspur hawthorn	FACU	5, 6	seasonal	Н	М	20- 25'	20- 30'	full sun-part shade	Philadelphia County	С	keeps berries all winter; tolerant of many soils
tree	Crataegus pruinosa	frosted hawthorn		4, 5	seasonal	М	U	20- 24'	24'	full sun-part	Pennsylvania	С	white flowers; adaptable; high wildlife value
tree	Fagus grandifolia	american beech	FACU	4 (5, 6)	no	Н	N	40- 80'	50- 70'	shade sun-shade	Philadelphia County	С	compaction intolerant; intolerant of poorly-drained soils
tree	Fraxinus americana	white ash	FACU	4 (5, 6)	no	L	N	60- 80'	50- 80'	full sun-part shade	Philadelphia County	С	well-drained soils; compaction tolerant
tree	Fraxinus pennsylvanica	green ash	FACW	3, 4, 5	seasonal	М	L	35- 50'	50-	full sun	Philadelphia County	С	good bank stabilizer, compaction resistant; good street tree, but may develop surface roots with age
tree	Gleditsia triacanthos	honeylocust		3, 4, 5	seasonal	Н	L	50- 75'	60' 50- 75'	full sun	Philadelphia County	С	gold fall color; very adaptable; compaction tolerant; taproot; good street tree
tree	Ilex opaca	american holly	FACU	4, 5, 6	no	М	L	10- 20'	40- 50'	full sun-part shade	Philadelphia County	С	acidic well drained soils; intolerant of wind
tree	Juglans nigra	black walnut	FACU	5, 6	seasonal	L	Ν	75- 100'	50- 75'	full sun	Philadelphia County	С	flood and compaction tolerant; yellow-green flowers give way to edible nuts
tree	Juniperus virginiana	eastern red cedar	FACU	4, 5, 6	no	Н	М	8-25'	50- 75'	full sun	Philadelphia County	С	flood and shade intolerant; very tolerant of many soils; beautiful reddish bark
tree	Liquidambar styraciflua	sweetgum	FAC	3, 4, 5	seasonal	L	М	20- 30'	60- 75'	full sun	Philadelphia County	С	heat and flood tolerant; outstanding fall color; good street tree
tree	Liriodendron tulipifera	tulip tree	FACU	4, 5, 6	no	М	L	30- 50'	70- 100'	full sun-part shade	Philadelphia County	С	heat and compaction sensitive; rapid growth
tree	Magnolia virginiana	sweetbay magnolia	FACW+	3, 4, 5	seasonal	N	М	10- 20'	10- 20'	sun-shade	Philadelphia County	С	sandy-peaty acidic soil; attractive, fragrant flowers
tree	Nyssa sylvatica	sourgum	FAC	2 (3, 4) 5	seasonal	L	М	20- 30'	30- 50'	full sun	Philadelphia County	С	compaction tolerant; heat resistant
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tree	Pinus rigida	pitch pine	FACU	4, 5, 6	по	М	М	30- 50'	40- 60'	full sun	Philadelphia County	С	acidic soils; compaction sensitive; heat resistant
tree	Pinus strobus	white pine	FACU	4, 5, 6	no	N	N	20- 40'	50- 100'	full sun-part shade	Philadelphia County	С	heat and compaction sensitive; long-lived; tolerant of poor soils
tree	Pinus virginiana	scrub pine		5, 6	no	Н	Ν	10- 20'	15- 40'	full sun	Philadelphia County	С	tolerant of poor sterile soils; beautiful golden foliage in winter
tree	Platanus occidentalis	sycamore	FACW-	3, 4, 5	seasonal	L	Ν	75- 100'	75- 100'	full sun-part shade	Philadelphia County	С	compaction resistant
tree	Populus deltoides	cottonwood	FACU-	3, 4, 5	seasonal	L	L	35- 60'	75- 100'	full sun	Philadelphia County	С	compaction resistant; pioneer species
tree	Populus grandidentata	large-toothed aspen	FACU-	4, 5, 6	no	L	N	20- 30'	50- 70'	full sun	Philadelphia County	С	compaction sensitive; pioneer species
tree	Populus tremuloides	quaking aspen	FACU	4, 5, 6	seasonal	L	Ν	20- 30'	35- 50'	full sun	Philadelphia County	С	compaction sensitive; pioneer species
tree	Prunus serotina	black cherry	FACU	4, 5, 6	no	М	Ν	30- 60'	50- 60'	full sun	Philadelphia County	С	compaction intolerant; pioneer species
tree	Quercus alba	white oak	FACU	4, 5, 6	no	М	М	50- 80'	50- 80'	full sun-part shade	Philadelphia County	С	compaction very sensitive; acidic soils; long lived
tree	Quercus bicolor	swamp white oak	FACW+	2, 3, 4, 5	seasonal	L	L	50- 60'	50- 60'	full sun-part shade	Philadelphia County	С	compaction resistant
tree	Quercus coccinea	scarlet oak		5, 6	no	М	Ν	40- 50'	50- 75'	full sun	Philadelphia County	С	compaction intolerant, long lived, nice fall color
tree	Quercus falcata	southern red oak	FACU-	6	no	Н	N	50- 60'	70- 80'	full sun-part shade	Philadelphia County	С	high winter wildlife value; found in dry to moist woods
tree	Quercus marilandica	blackjack oak	1	5, 6	no	Н	L	15- 40'	30- 40'	full sun	Philadelphia County	С	very flood intolerant; compaction sensitive
tree	Quercus palustris	pin oak	FACW	(3) 4, 5, 6	seasonal	L	Ν	40- 60'	60- 70'	full sun	Philadelphia County	С	acidic well drained soils; compaction resistant; good street tree
tree	Quercus phellos	willow oak	FACU-	(3, 4) 5	seasonal	N	N	25- 50'	40- 60'	full sun-part shade	Philadelphia County	С	acidic soils; tolerates poor drainage; compaction tolerant
tree	Quercus rubra	red oak	FACU-	5, 6	no	М	М	50- 75'	60- 75'	full sun	Philadelphia County	С	acidic soils; compaction and pollution tolerant
tree	Quercus velutina	black oak		5, 6	no	L	Ν	40- 50'	50- 60'	full sun-part shade	Philadelphia County	С	compaction intolerant; acidic soils
tree	Salix nigra	black willow	FACW+	(2, 3) 4	seasonal	L	N	20- 35'	35- 50'	full sun	Philadelphia County	С	compaction resistant
tree	Sassafras albidum	sassafras	FACU	6	no	Н	N	25- 40'	30- 60'	full sun-part shade	Philadelphia County	С	compaction intolerant; pioneer species; flood intolerant
tree	Tilia americana	basswood	FACU	(4, 5) 6	no	М	N	30- 50'	60- 80'	full sun-part shade	Philadelphia County	С	compaction sensitive; fragrant pale yellow spring flowers
tree	Ulmus americana	american elm	FACW-	(3) 4, 5, 6	seasonal	н	Н	50- 75'	60- 90'	full sun	Philadelphia County	С	rare due to Dutch elm disease; new resistant stock; graceful vase form
tree	Ulmus rubra	slippery elm	FAC-	(3) 4, 5, 6	seasonal	Н	Н	50- 75'	60- 90'	full sun-part shade	Philadelphia County	С	seeds are eaten by birds and small mammals; shade tolerant

#### \* NATIONAL WETLAND INDICATOR (probability of occurring in a wetland):

OBL	Obligate wetland species	99%						
FACW	Facultative wetland species	67-99%						
FAC	Facultative species	34-66%						
FACU	Facultative upland species	1-33%						
UPL	Upland species	1%						
(+)	Indicates that the species occurs in	the higher portion of the range						
(-)	Indicates that the species occurs in the lower portion of the range							
Those species with no wetland indicator are	virtually intolerant of flooding or prol	onged soil saturation during the growing season.						

## \*\* HYDROLOGIC ZONES

Zone 1: Open water - Permanent pool (12 inches - 6 feet) This zone is best colonized by submergent plants, if at all. This deep water zone is not usually planted for several reasons: there are few species that can grow in this zone, and many are not commercially available; open water areas provide unique habitat; and deep water aquatic plants may clog the stormwater facility outlet structure. The benefits of planting in this zone include the absorption of nutrients in the water column; enhanced sediment deposition; improved oxidation; and the creation of additional habitat.

Zone 2: Shallow water terrace/Aquatic bench (6 inches -1 foot) This zone offers ideal conditions for a wide variety of emergent wetland plants. These areas typically fringe the ponding area and are permanently inundated.

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

This zone is typically the shoreline of a pond or wetland - its width determined by the design slope. This zone is usually inundated except during periods of drought and is the interface between the emergent wetland plantings and the upland plantings. Plants must be able to withstand periods of inundation as well as periods of drought and should have some capacity for slope stabilization.

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

This zone extends upslope from zone 3 and may be inundated after storms. It constitutes the majority of the temporary extended detention area. Plants selected should be able to withstand periodic inundation after storms as well as significant drought during the summer.

Zone 5: Floodplain terrace (infrequent inundation, temporarily saturated soils) Zone 5 is infrequently saturated by floodwaters that quickly recede in a day or less. Plants should be able to withstand infrequent inundation as well as drought and should offer some slope stabilization.

#### Zone 6: Upland (never inundated)

This zone extends above the maximum design water surface elevation. Plant selection should be based on local soil and light conditions, and on the amount of available space for plantings.

## REFERENCES:

The Plants of Pennsylvania: An Illustrated Manual, Ann Rhoads, Timothy Block, Anna Anisko Fairmount Park Commission: Selected Trees & Shrubs Native to Philadelphia County (brochure) Fairmount Park Commission: Selected Wildflowers, Ferns, Grasses, Sedges, & Rushes Native to Philadelphia County (brochure) Website: U.S. Department of Agriculture, Natural Resources Conservation Service: PLANTS Database http://plants.usda.gov/ Website: The Kemper Center for Home Gardening: PlantFinder http://www.mobot.org/gardeninghelp/plantfinder/Alpha.asp Website: Plants of the North: http://www.rook.org/earl/bwca/nature/flora.html Website: NC State University Plant Factsheets http://www.esn.csu.edu/depts/hort/consumer/factsheets/index.html Website: University of Connectice Plant Database http://www.fort.uconn.edu/plants/index.html