

**APPENDIX D
NATIVE PLANTS FOR USE
IN BIORETENTION**

Appendix D: Native Plants for Use in Bioretention

NATIVE PLANTS FOR USE IN BIORETENTION

The following is a list of plant options for installation in bioretention basins. Additional plants can be recommended by the licensed Landscape Architect. Planting plans are subject to City approval.

Table D.1. Native Perennials for Bioretention – Full Sun

Latin Name	Common Name	Size	Spacing	Moisture	Color	Height
<i>Amsonia tabernaemontana</i>	Bluestar	Plugs – 1 gal.	1plant/18" o.c.	Moist	Blue	2-3'
<i>Asclepias incarnata</i>	Marsh milkweed	Plugs – 1 gal.	1 plant/24" o.c.	Wet	Pink	3-4'
<i>Asclepias syriaca</i>	Common milkweed	Plugs – 1 gal.	1 plant/18" o.c.	Moist-dry	Orange	2-5'
<i>Asclepias tuberosa</i>	Butterfly milkweed	Plugs – 1 gal.	1 plant/18" o.c.	Dry-moist	Orange	2'
<i>Asclepias verdis</i>	Green milkweed	Plugs – 1 gal.	1 plant/18" o.c.	moist	Green	2'
<i>Asclepias verticillata</i>	Whorled milkweed	Plugs – 1 gal.	1 plant/18" o.c.	moist	White	2.5'
<i>Aster laevis</i>	Smooth aster	Plugs – 1 gal.	1 plant/18" o.c.	moist	Blue	2-4'
<i>Aster sericeus</i>	Silky aster	Plugs – 1 gal.	1 plant/18" o.c.	dry	Purple	1-2'
<i>Baptisia australis</i>	Wild indigo	Plugs – 1 gal.	1 plant/24" o.c.	Dry	Blue	1.5-2.5'
<i>Chamaecrista fasciculata</i>	Partridge pea	Plugs – 1 gal.	1 plant/18" o.c.	dry	Yellow	1-2'
<i>Conoclinium coelestinum</i>	Mist flower	Plugs – 1 gal.	1 plant/18" o.c.	Moist-dry	Blue	1-2'
<i>Coreopsis tinctoria</i>	Coreopsis	Plugs – 1 gal.	1 plant/18" o.c.	Moist-dry	Yellow	2-3'
<i>Echinacea pallida</i>	Pale purple coneflower	Plugs – 1 gal.	1 plant/18" o.c.	dry	Purple	2-3'
<i>Echinacea purpurea</i>	Purple coneflower	Plugs – 1 gal.	1 plant/18" o.c.	Moist-dry	Purple	3-4'
<i>Eupatorium perfoliatum</i>	Boneset	Plugs – 1 gal.	1 plant/24" o.c.	wet	White	3-5'
<i>Eupatorium purpureum</i>	Sweet Joe-Pye Weed	Plugs – 1 gal.	1 plant/24" o.c.	Wet-moist	Purple	3-6'
<i>Hibiscus moscheutos</i>	Swamp mallow	Plugs – 1 gal.	1 plant/36" o.c.	Wet	White-Pink	3-5'
<i>Iris virginica</i>	Flag Iris	Plugs – 1 gal.	1 plant/18" o.c.	Moist-Wet	Blue	2'
<i>Liatris spicata</i>	Dense blazingstar	Plugs – 1 gal.	1 plant/24" o.c.	Moist-dry	Purple	1.5'
<i>Lobelia cardinalis</i>	Cardinal flower	Plugs – 1 gal.	1 plant/18" o.c.	Wet-moist	Red	2-4'
<i>Monarda didyma</i>	Bee balm	Plugs – 1 gal.	1 plant/24" o.c.	Wet-moist	Red	3'
<i>Monarda fistulosa</i>	Wild bergamot	Plugs – 1 gal.	1 plant/18" o.c.	Moist-dry	Purple	1-3'
<i>Oenothera speciosa</i>	Evening primrose	Plugs – 1 gal.	1 plant/18" o.c.	Moist-dry	Pink	1-2'
<i>Penstemon digitalis</i>	Smooth white beardtongue	Plugs – 1 gal.	1 plant/24" o.c.	Wet	White	2-3'
<i>Pycnanthemum albescens</i>	Mountain mint	Plugs – 1 gal.	1 plant/18" o.c.	Moist	White	1.5-2.5'
<i>Physostegia virginiana</i>	False dragonhead	Plugs – 1 gal.	1 plant/18" o.c.	Wet-moist	White	4-6'
<i>Rudbeckia hirta</i>	Black-eyed Susan	Plugs – 1 gal.	1 plant/18" o.c.	Moist-dry	Yellow	3'
<i>Solidago sp.</i>	Goldenrod	Plugs – 1 gal.	1 plant/18" o.c.	Moist-dry	Yellow	1-6'
<i>Tradescantia sp.</i>	Spiderwort	Plugs – 1 gal.	1 plant/18" o.c.	Moist-dry	Blue	1.5-3'
<i>Verbena canadensis</i>	Verbena	Plugs – 1 gal.	1 plant/18" o.c.	Moist-dry	Purple	0.5-1.5'
<i>Veronia gigantea</i>	Giant ironweed	Plugs – 1 gal.	1 plant/24" o.c.	Wet-moist	Purple	3-4'
<i>Yucca sp.</i>	Yucca	1 gal.	1plant/24" o.c.	Dry	White	2-5'

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Table D.2. Native Perennials for Bioretention – Shade.

Latin Name	Common Name	Size	Spacing	Moisture	Color	Height
<i>Adiantum pedatum</i>	Maidenhair fern	1 gal.	1 plant/18" o.c.	Moist	Green	1-1.5'
<i>Aquilegia canadensis</i>	Wild columbine	Plugs – 1 gal.	1 plant/18" o.c.	Moist-dry	Pink	1-2.5'
<i>Athyrium filix-femina</i>	Lady Fern	1 gal.	1 plant/18" o.c.	Moist	Green	3'
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	Plugs – 1 gal.	1 plant/18" o.c.	Moist	Green	1.5-2.5'
<i>Arisaema dricontium</i>	Green dragon	Plugs – 1 gal.	1 plant/18" o.c.	Wet-moist	Green	3'
<i>Asarum canadense</i>	Wild ginger	Plugs – 1 gal.	1 plant/18" o.c.	Wet-moist	Red-brown	0.5-1'
<i>Aster cardifolius</i>	Blue wood aster	Plugs – 1 gal.	1 plant/18" o.c.	Moist-dry	Blue	1-3'
<i>Coreopsis lanceolata</i>	Tickseed coreopsis	Plugs – 1 gal.	1 plant/18" o.c.	Moist-dry	Yellow	3'
<i>Delphinium sp.</i>	Larkspur	Plugs – 1 gal.	1 plant/18" o.c.	Moist-dry	Blue-purple	1-4'
<i>Geranium maculatum</i>	Wild geranium	Plugs – 1 gal.	1 plant/18" o.c.	Moist	Pink	2'
<i>Heuchera americana</i>	Alumroot	Plugs – 1 gal.	1 plant/18" o.c.	Moist-dry	Purple	1'
<i>Iris cristata</i>	Dwarf crested iris	Plugs – 1 gal.	1 plant/18" o.c.	Moist-dry	Purple	4"
<i>Lobelia siphilicata</i>	Great blue lobelia	Plugs – 1 gal.	1 plant/18" o.c.	Wet-moist	Blue	1.5-3'
<i>Lobelia cardinalis</i>	Cardinal flower	Plugs – 1 gal.	1 plant/18" o.c.	Wet-moist	Red	2-4'
<i>Onoclea sensibilis</i>	Sensitive fern	1 gal.	1 plant/24" o.c.	Wet-moist	Green	2-3.5'
<i>Osmunda cinnamomea</i>	Cinnamon Fern	1 gal.	1 plant/24" o.c.	Wet-moist	Green	3-4'
<i>Phlox divaricata</i>	Blue phlox	Plugs – 1 gal.	1 plant/18" o.c.	moist	Blue	0.5-2'
<i>Polygonatum biflorum</i>	Solomon's seal	Plugs – 1 gal.	1 plant/18" o.c.	Moist	Green	2-4'
<i>Polystichum acrostichoides</i>	Christmas fern	Plugs – 1 gal.	1 plant/24" o.c.	Moist-dry	Evergreen	2'

Table D.3. Native Grasses, Sedges, and Similar Plants for Bioretention.

Latin Name	Common Name	Size	Spacing	Moisture	Color	Height
<i>Acorus calamus</i>	Sweet flag	1 gal.	1 plant/24" o.c.	Moist	Green	3-5'
<i>Andropogon gerardii</i>	Big bluestem	1 gal.	1 plant/24" o.c.	Moist	Green	4-7'
<i>Andropogon virginicus</i>	Broom-sedge	1 gal.	1 plant/24" o.c.	Moist-dry	Green	2-3'
<i>Carex sp.</i>	Sedge	1 gal.	1 plant/24" o.c.	Moist	Green	2-3'
<i>Carex grayi</i>	Gray's Sedge	1 gal.	1 plant/24" o.c.	Moist	Green	3'
<i>Carex muskingumensis</i>	Palm Sedge	1 gal.	1 plant/24" o.c.	Moist	Green	3'
<i>Carex stricta</i>	Tussock Sedge	1 gal.	1 plant/24" o.c.	Moist	Green	3-4'
<i>Chasmanthium latifolium</i>	Upland Sea Oats	Plugs – 1 gal.	1 plant/18" o.c.	Moist-dry	Green	4'
<i>Juncus effesus</i>	Soft Rush	Plugs – 1 gal.	1 plant/24" o.c.	Wet-dry	Green	3-5'
<i>Muhlenbergia capallaris</i>	Muhly Grass	1 gal.	1 plant/24" o.c.	Moist	Pink	3'
<i>Panicum virgatum</i>	Switchgrass	1-3 gal.	1 plant/48" o.c.	Moist-dry	Yellow	5-7'
<i>Schizachyrium scoparium</i>	Little Blue Stem	1 gal.	1 plant/24" o.c.	Moist-dry	Yellow	3'
<i>Sorghastrum nutans</i>	Indian grass	1 gal.	1 plant/24" o.c.	Moist-dry	Green	2-4'
<i>Stipa sp.</i>	Needle grass	1 gal.	1 plant/24" o.c.	Dry	Green	1-3'

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Table D.4. Native Trees for Bioretention.

Latin Name	Common Name	DT-FT1	Light	Moisture	Notes	Flower Color	Height
<i>Acer rubrum</i>	Red Maple	DT-FT	Sun-shade	Dry-wet	Fall color		50-70'
<i>Acer saccharum</i>	Sugar Maple		Sun-pt shade	Moist	Fall color		50-75'
<i>Ameleanchier Canadensis</i>	Serviceberry		Sun-pt shade	Moist-wet	Eatable berries	White	15-25'
<i>Asimina triloba</i>	Paw Paw		Sun-pt shade	Moist	Eatable fruits	Maroon	15-30'
<i>Betula nigra</i>	River Birch	FT	Sun-pt shade	Moist-wet	Exfoliating bark		40-70'
<i>Carpinus caroliniana</i>	Ironwood		Sun-pt shade	Moist	Interesting trunk	White	40-60'
<i>Carya aquatica</i>	Water Hickory	FT-DT	Sun	Moist	Fall color		35-50'
<i>Carya tomentosa</i>	Mockernut Hickory		Sun	Moist	Fall color, fruit		60-80'
<i>Cercis Canadensis</i>	Redbud	DT	Sun-shade	Moist	Pea-like flowers, seed pods	Purple	20-30'
<i>Cladratis lutea</i>	Yellowwood	DT	Sun	Dry-moist	Fall color	White	30-45'
<i>Cornus florida</i>	Flowering Dogwood		Part shade	Moist	Red fruit, wildlife	White	15-30'
<i>Cotinus obovatus</i>	American smoketree	DT	Sun-Pt Shade	Dry	Fall color	Yellow	15-30'
<i>Diospyros virginiana</i>	Persimmon	FT	Sun-Pt shade	Moist-Wet	Fall color, edible fruit		30-50'
<i>Liquidambar styraciflua</i>	Sweetgum	DT-FT	Sun-pt shade	Dry-moist	Spiny fruit		60-100'
<i>Nyssa sylvatica</i>	Black Gum		Sun-Shade	Moist	Fall color		35-50'
<i>Platanus occidentalis</i>	Sycamore	FT	Sun-pt shade	Moist	White mottled bark		70-100'
<i>Prunus serotina</i>	Black Cherry	DT	Sun	Dry-moist	Fruit, wildlife	White	60-80'
<i>Quercus alba</i>	White Oak		Sun	Dry-Moist	Bark, Acorns		65-85'
<i>Quercus bicolor</i>	Swamp White Oak	DT	Sun-pt shade	Moist-wet	Acorns		50-60'
<i>Quercus lyrata</i>	Overcup Oak	FT	Sun	Moist	Acorns		40-60'
<i>Quercus rubra</i>	Northern Red Oak		Sun	Dry-Moist	Acorns, Fall Color		70-90'
<i>Rhamnus caroliniana</i>	Carolina Buckthorn		Sun	Moist	Black fruit		15-30'
<i>Sassafras albidum</i>	Sassafras		Sun-pt shade	Moist-dry	Fall Color		20-50'
<i>Ulmus americana</i> var. "Valley Forge"	American Elm	DT-FT	Sun-pt shade	Moist	Fall color		50-80'

DT = Drought Tolerant.
FT = Flood Tolerant.

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Table D.5. Native Shrubs for Bioretention

Latin Name	Common Name	DT-FT	Light	Moisture	Notes	Flower Color	Height
<i>Buddleia davidii</i>	Butterfly Bush	DT	Sun-pt shade	Dry-moist	Non-native	Blue	5'
<i>Callicarpa americana</i>	American Beautyberry	DT	Sun-pt shade	Dry-moist	Showy purple fruit	Lilac	4-6'
<i>Cephalanthus occidentalis</i>	Button Bush	FT	Sun-shade	Moist-wet	Attracts wildlife	White	6-12'
<i>Chionanthus virginicus</i>	Fringetree		Sun-pt shade	Moist	Panicked, fragrant flowers	White	12-20'
<i>Cornus amomum</i>	Silky Dogwood	FT	Sun-shade	Moist-wet	Blue berries, wildlife	White	6-12'
<i>Corylus americana</i>	American Hazelnut		Sun-pt shade	Dry-moist	Eatable nuts, wildlife	Yellow	8-15'
<i>Hamamelis virginiana</i>	Witch-hazel		Sun-pt shade	Dry-moist	Winter bloom	Yellow	10'
<i>Hypericum prolificum</i>	Shrubby St. John's Wort	DT	Sun-pt shade	Dry-moist	Semi-evergreen	Yellow	3'
<i>Ilex decidua</i>	Deciduous holly	FT	Sun-pt shade	Moist	Red berries	Green	15-20'
<i>Lindera benzoin</i>	Spicebush	DT	Pt shade – shade	Moist-wet	Butterflies, wildlife	Yellow	6-12'
<i>Ptelea trifoliata</i>	Wafer-ash		Sun-pt shade	Moist	Interesting fruit	White	6-15'
<i>Rhododendron sp.</i>	Rhododendron/azalea	DT	Pt shade-shade	Moist-dry	Showy blooms, butterflies	Various	4-6'
<i>Salix humilis</i>	Prairie willow	DT	Sun	Moist-dry	Fruit, fall color	Green	2-8'
<i>Sambucus cqnadensis</i>	American elderberry		Sun-pt shade	Moist	Purple berries	White	6-10'
<i>Staphlea trifolia</i>	Bladdernut		Pt shade-shade	Moist	Showy fruit, butterflies	White	4-12'
<i>Viburnum dentatum</i>	Arrowwood Viburnum		Sun-shade	Dry-wet	Wildlife	White	6-8'
<i>Viburnum rufidulum</i>	Blackhaw Viburnum	DT	Sun-pt shade	Dry-moist	Wildlife	White	10-15'

1. DT = Drought Tolerant.
2. FT = Flood Tolerant.

Appendix D: Native Plants for Use in Bioretention

POPULAR PLANTS SUITABLE FOR TREE PLANTERS IN FAYETTEVILLE

Table D.6. Popular Native Perennials Suitable for Tree Planters			
Hydrophytic species-wet gardens		Upland species-well-drained gardens	
Trees		Trees	
<i>Fraxinus pennsylvanica</i>	green ash	<i>Sassafras albidum</i>	sassafras
<i>Diospyros virginiana</i>	persimmon	<i>Cercis canadensis</i> *	redbud
<i>Acer rubrum</i>	red maple	<i>Amelanchier arborea</i>	serviceberry
<i>Liquidambar styraciflua</i>	sweetgum	<i>Carya tomentosa</i>	mockernut hickory
<i>Betula nigra</i>	river birch	<i>Cornus florida</i> *	flowering dogwood
<i>Asimina triloba</i> *	paw-paw	<i>Cotinus obovatus</i>	American smoketree
<i>Celtis laevigata</i>	sugarberry	<i>Prunus serotina</i>	black cherry
		<i>Quercus alba</i>	white oak
		<i>Quercus rubra</i>	red oak
		<i>Fraxinus americana</i>	white ash
Shrubs		Shrubs	
<i>Cephalanthus occidentalis</i> *	buttonbush	<i>Chionanthus virginiana</i> *	fringe tree
<i>Ilex decidua</i>	deciduous holly	<i>Virburnum molle</i> *	viburnum
<i>Lindera benzoin</i> *	spicebush	<i>Ptelea trifoliata</i>	wafer ash
<i>Staphlea trifolia</i>	bladdernut	<i>Buddleia davidii</i> **	butterfly bush
<i>Hamamelis virginiana</i> *	witch hazel	<i>Rhododendron sp. (Azalea)</i> *	azalea/rhododendron
<i>Sambucus canadensis</i>	elderberry	<i>Rhus coppalinum</i>	smooth sumac
		<i>Salix humilis</i>	prairie willow
Herbaceous		Herbaceous	
<i>Asclepias incarnata</i>	swamp milkweed	<i>Rudbeckia hirta</i>	black-eyed susan
<i>Physostegia virginiana</i>	false dragonhead	<i>Liatris spicata</i>	spiked gayfeather
<i>Pycnanthemum albescens</i>	mountain-mint	<i>Asclepias tuberosa</i>	butterfly milkweed
<i>Solidago sp.</i>	goldenrod	<i>Solidago sp.</i>	goldenrod
<i>Aster sp.</i>	Aster	<i>Coreopsis tinctoria</i>	golden tickseed
<i>Amsonia tabernaemontana</i>	bluestar	<i>Penstemon digitalis</i>	foxglove beardtongue
<i>Eupatorium sp.</i>	joe-pye weed, boneset	<i>Yucca sp.</i>	Yucca
<i>Lobelia silphilitica</i>	big lobelia	<i>Baptisia australis</i>	wild indigo
<i>Lobelia cardinalis</i>	cardinal flower	<i>Verbena canadensis</i>	verbena
<i>Hibiscus moscheutos</i>	swamp mallow	<i>Monarda sp.</i>	bee balm
<i>Acorus calamus</i>	sweet flag	<i>Echinacea purpurea</i>	purple coneflower
<i>Arisaema triphyllum</i>	jack-in-the-pulpit	<i>Aster sp.</i>	Aster
<i>Onoclea sensibilis</i> *	sensitive fern	<i>Tradescantia sp.</i> *	spiderwort
<i>Juncus effusus</i>	soft rush	<i>Delphinium sp.</i>	larkspur
<i>Andropogon gerardii</i>	big bluestem	<i>Phlox sp.</i> *	Phlox
<i>Andropogon virginicus</i>	broom-sedge	<i>Oenothera speciosa</i>	evening primrose
<i>Carex sp.</i> (various caric sedges)	Caric sedge	<i>Panicum virgatum</i>	switchgrass
<i>Cyperus sp.</i>	flatsedge	<i>Sorghastrum nutans</i>	Indian grass
<i>Iris sp.</i>	Iris	<i>Stipa sp.</i>	needle grass
<i>Equisetum hymale</i>	horsetail	<i>Andropogon virginicus</i>	broom-sedge
<i>Polygonatum biflorum</i>	Solomon's seal	<i>Adiantum pedatum</i> *	northern maiden-hair fern