

Detention Basin Planting Guidelines

CHARTER TOWNSHIP OF CANTON
 DEPARTMENT OF MUNICIPAL SERVICES
 PLANNING SERVICES DIVISION
 1150 Canton Center Road, Canton, MI 48188 • 734/394-5170

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Refer to Article 5.02 General Landscaping Requirements.

1. Definitions

- a. Native Plants-Naturally occurring, indigenous plants within a specific habitat of a specific biogeographic region. Native plants are adapted to the soil and climate in which they live, and have evolved defenses to many diseases and insect pests.
- b. Forb-Herbaceous plants, other than grasses, that commonly grow in fields or meadows. Forbs are used for re-vegetation, wild flower gardens, prairie and detention basin planting and roadside plantings.
- c. Bare-Root Stock-Plants received with very little, if any, soil around the roots and are generally wrapped in Hessian cloth or plastic to stop the roots from drying out.
- d. Plug-Plants raised as individual plants, each in a small container about the size of an ice cube. The cube of greenhouse soil ("plug") can be pried from the tray, containing an individual plant up to 6 inches tall. Using a digging stick, the plants are plugged into the soil.

2. Approved Shrubs and Trees Species for Detention Basins.

Edge Zone			
Native Shrubs		Native Trees	
Scientific Name	Common Name	Scientific Name	Common Name
Alnus rugosa	Speckled alder	Acer saccharinum	Silver maple
Aronia melanocarpa	Black chokeberry	Betula nigra	River birch
Betula pumila	Bog birch	Carpinus caroliniana	American hornbeam
Cephalanthus occidentalis	Buttonbush (plant in min. 6" water)	Nyssa sylvatica	Black gum
Cornus amomum	Silky dogwood	Platanus occidentalis	Sycamore
Cornus stolonifera	Red-osier dogwood	Quercus bicolor	Swamp white oak
Ilex verticillata	Winterberry (Michigan Holly)	Liquidambar Styraciflua	Sweetgum
Potentilla fruticosa	Shrubby cinquefoil	Liriodendron tulipifera	Tuliptree
Sambucus canadensis	Elderberry	Quercus palustris	Pin oak
Spiraea alba	Meadowsweet	Salix nigra	Black willow
Viburnum lentago	Nannyberry		
Viburnum trilobum	American highbush cranberry		



Upland Zone

Native Shrubs

Native Trees

<i>Scientific Name</i>	<i>Common Name</i>	<i>Scientific Name</i>	<i>Common Name</i>
Ceanothus americanus	New Jersey tea (dry-mesic)	Acer rubrum	Red maple (mesic)
Cornus foemina (C. racemosa)	Gray dogwood (dry to wet-mesic)	Acer saccharum	Sugar maple (mesic)
Corylus americana	American filbert (dry or mesic)	Amelanchier arborea	Serviceberry (Juneberry) (dry or mesic)
Hamamelis virginiana	Witch-hazel (dry-mesic)	Betula alleghaniensis	Yellow birch (mesic)
Lindera benzoin	Spicebush (mesic)	Carya cordiformis	Bitternut hickory (mesic)
Physocarpus opulifolius	Ninebark (dry or mesic)	Carya glabra	Pignut Hickory (dry)
Rhus aromatica	Fragrant sumac (dry)	Carya lacinosa	Shellbark hickory (mesic)
Sambucus canadensis	Elderberry (wet-mesic)	Carya ovata	Shagbark hickory (dry-mesic)
Viburnum dentatum	Arrowwood (dry-mesic)	Celtis occidentalis	Hackberry (mesic)
<p>Note: These plants range from dry to mesic according to the moisture conditions in the Upland Zone. Small sizes of native trees and shrubs may be proposed to increase plant diversity. The total tree caliper inches must equal the calculated caliper inches of required trees.</p>		Celtis tenuifolia	Dwarf hackberry (dry-mesic)
		Cercis canadensis	Redbud (mesic)
		Crataegus crusgalli	Cockspur hawthorn (dry)
		Gymnocladis dioicus	Kentucky coffeetree (mesic)
		Ostrya virginiana	Hop-hornbeam Ironwood (dry-mesic)
		Quercus alba	White oak (dry-mesic)
		Quercus imbricaria	Shingle oak (mesic)
		Quercus macrocarpa	Bur oak (dry or mesic)
		Quercus muehlenbergii	Chinkapin oak (dry or mesic)
		Quercus prinoides	Dwarf Chinkapin oak (dry)
		Quercus rubra	Red oak (mesic)
		Tilia americana	American basswood (mesic)

3. Native Plant (Forb) Species by Planting Zone.

Pond Zone (Minimum 4 species)					
Scientific Name	Common Name	Plant Spacing (inches on center)	Scientific Name	Common Name	Plant Spacing (inches on center)
Acorus calamus	Sweet flag	24	Polygonum amphibium	Water knotweed	36
Carex lacustris	Common lake sedge	24	Pontederia cordata	Pickereel weed	24
Cephalanthus occidentalis	Buttonbush	5 feet	Potamogeton natans	Common pondweed	36
Decodon verticillatus	Swamp loosestrife	24	Potamogeton pectinatus	Sago pondweed	36
Elodea canadensis	Common waterweed	36	Sagittaria latifolia	Common arrowhead	24
Hibiscus laevis	Halberd-leaved rose mallow	24	Scirpus acutus	Hard-stemmed bulrush	18
Hibiscus palustris	Swamp rose mallow	24	Scirpus atrovirens	Dark green rush	18
Iris virginica shrevei	Blue flag iris	18	Scirpus cyperinus	Wool grass	24
Justicia americana	Water willow	5 feet	Scirpus fluviatilis	River bulrush	18
Nelumbo lutea	Lotus	48	Scirpus validus creber	Great bulrush	18
Nuphar advena	Yellow pond lily	36	Sparganium americanum	American bur reed	18
Nymphaea tuberosa	White water lily	36	Sparganium eurycarpum	Common bur reed	18
Peltandra virginica	Arrow arum	18	Vallisneria americana	Tape grass	36

Note: Plant species selected must cover 25% of the pond zone and must also cover the range of water depths within the pond zone (0' to 3'). (For example, 4 plant species may not all be placed at an 18" water depth covering 25% of the pond zone.)

4. Native seed mixes by planting zone.

Edge Zone : Grasses/Sedges/Rushes (Minimum 5 species)			
Scientific Name	Common Name	Scientific Name	Common Name
Carex lurida	Bottlebrush sedge	Juncus effusus	Common rush
Carex vulpinoidea	Brown fox sedge	Leersia oryzoides	Rice cut grass
Echinochloa crusgalli	Barnyard grass	Scirpus acutus	Hard-stemmed bulrush
Elymus canadensis	Canada wild rye	Scirpus atrovirens	Dark green rush
Glyceria striata	Fowl manna grass	Scirpus pungens	Chairmaker's rush
		Scirpus validus creber	Great bulrush (softstem)

Edge Zone : Native Forbs (Minimum 9 species)			
Scientific Name	Common Name	Scientific Name	Common Name
Acorus calamus	Sweet flag		
Actinomeris alternifolia	Wingstem	Mimulus ringens	Monkey flower
Alisma subcordatum	Common water plantain	Peltandra virginica	Arrow arrum
Asclepias incarnata	Swamp milkweed	Polygonum pensylvanicum	Pinkweed
Aster simplex	Panicled aster	Pontederia cordata	Pickereel weed
Bidens spp.	Bidens, various	Rosa palustris	Swamp rose
Cassia hebecarpa	Wild senna	Rudbeckia laciniata	Wild golden glow
Eupatorium perfoliatum	Common boneset	Sagittaria latifolia	Common arrowhead
Helenium autumnale	Sneezeweed	Spiraea alba	Meadowsweet
Iris virginica shrevei	Blue flag iris	Verbena hastata	Blue vervain
Ludwigia alternifolia	Seedbox	Vernonia fasciculata	Common ironweed

Note: An annual cover crop is required for all Edge Zone seed mixes as described in Section 1.5 Native Plant Installation: Seeding vs. Planting of Plugs/Bare-Root Stock.

Upland Zone : Grasses/Sedges/Rushes (Minimum 5 species)

Scientific Name	Common Name	Scientific Name	Common Name
Calamagrostis canadensis	Blue joint grass	Glyceria striata	Fowl manna grass
Carex comosa	Bristly sedge	Juncus effusus	Common rush
Carex hystericina	Porcupine sedge	Leersia oryzoides	Rice cut grass
Carex stricta	Common tussock sedge	Panicum virgatum	Switch grass
Carex vulpinoidea	Brown fox sedge	Scirpus atrovirens	Dark green rush
Echinochloa crusgalli	Barnyard grass	Scirpus validus creber	Great bulrush
Elymus canadensis	Canada wild rye	Spartina pectinata	Prairie cord grass

Upland Zone : Native Forbs (Minimum 9 species)

Scientific Name	Common Name	Scientific Name	Common Name
Agalinis tenuifolia	Slender false foxglove	Juncus effusus	Common rush
Alisma subcordatum	Common water plantain	Liatris spicata	Marsh blazing star
Angelica atropurpurea	Great angelica	Lobelia cardinalis	Cardinal flower
Asclepias incarnata	Swamp milkweed	Lobelia siphilitica	Great blue lobelia
Aster novae-angliae	New England aster	Ludwigia alternifolia	Seedbox
Aster puniceus	Bristly aster	Peltandra virginica	Arrow arrum
Aster simplex	Panicled aster	Physostegia virginiana	Obedient plant
Aster umbellatus	Flat-top aster	Pycnanthemum virginianum	Common mountain mint
Bidens cernua	Nodding Burr marigold	Sagittaria latifolia	Common arrowhead
Cassia hebecarpa	Wild senna	Silphium perfoliatum	Cup plant
Coreopsis tripteris	Tall coreopsis	Solidago rugosa	Rough goldenrod
Eupatorium maculatum	Spotted joe-pye weed	Sparganium eurycarpum	Common bur reed
Eupatorium perfoliatum	Common boneset	Spiraea alba	Meadowsweet
Gentiana andrewsii	Bottle gentian	Verbena hastata	Blue vervain
Helenium autumnale	Sneezeweed	Vernonia fasciculata	Common ironweed
Iris virginica shrevei	Blue flag iris	Zizia aurea	Golden alexanders

Note: These native plants are appropriate for the Upland Zone; from the bankfull elevation to the 100-year flood elevation and beyond. This seed selection consists of sedge meadow, wet-to-mesic prairie, and dry-to-mesic prairie plant species.

Natural Basin : Dry Upland Zone : Permanent Grasses (Minimum 5 species)

Scientific Name	Common Name	Scientific Name	Common Name
Andropogon gerardii	Big bluestem grass	Koeleria cristata	June grass
Andropogon scoparius	Little bluestem grass	Panicum virgatum	Switch grass
Bouteloua curtipendula	Side-oats gramma	Sorghastrum nutans	Indian grass
Elymus canadensis	Canada wild rye	Sporobolus heterolepis	Prairie dropseed

Natural Basin : Dry Upland Zone : Native Forbs (Minimum 9 species)

Scientific Name	Common Name	Scientific Name	Common Name
Amorpha canescens	Lead plant	Lupinus perennis	Wild lupine
Anemone cylindrica	Thimbleweed	Monarda fistulosa	Wild bergamot
Aquilegia canadensis	Wild columbine	Parthenium integrifolium	Wild quinine
Asclepias tuberosa	Butterfly weed	Petalostemum purpureum	Purple prairie clover
Aster ericoides	Heath aster	Physostegia virginiana arenaria	Prairie obedient plant
Aster laevis	Smooth blue aster	Pycnanthemum virginianum	Common mountain mint
Aster novae-angliae	New England aster	Ratibida pinnata	Yellow coneflower
Baptista leucantha	White wild indigo	Rudbeckia hirta	Black-eyed susan
Cassia fasciculata	Partridge pea	Rudbeckia subtomentosa	Sweet black-eyed susan
Coreopsis lanceolata	Sand coreopsis	Silphium laciniatum	Compass plant
Coreopsis tripteris	Tall coreopsis	Solidago juncea	Early goldenrod
Echinacea purpurea	Broad-leaved purple coneflower	Solidago nemoralis	Old-field goldenrod
Eryngium yuccifolium	Rattlesnake master	Solidago rigida	Stiff goldenrod
Helianthus mollis	Downy sunflower	Tradescantia ohioensis	Common spiderwort
Heliopsis helianthoides	False sunflower	Vernonia altissima taeniotricha	Hairy tall ironweed
Lespedeza capitata	Round-headed bush clover	Veronicastrum virginicum	Culver's root
Liatris aspera	Rough blazing star		

Note: These native plants are appropriate for areas surrounding basins categorized as natural basins and recommended within areas that have elevations higher than the 100-year flood elevation. This seed selection consists of dry-to-mesic prairie, basic prairie, and low-profile prairie plant species.