

# Use of Attractive Native Plants to Deter Erosion

## Develop vegetated areas along waterways

1. Moist not necessarily always wet drainage ditches
2. Wetlands
3. Lakes
4. Creeks
5. Streams
6. Rivers

## Goals

1. Retard and reduce rainwater runoff
2. Absorb and clear pollutants
3. Promote visual appeal – aesthetics
4. Promote biodiversity – include multiple species
5. Provide cover, habitat, food sources – native aquatic and terrestrial life

## Benefits of native plants

1. Adapted to local conditions – hardy
2. Comparatively minimal maintenance - environmentally friendly
3. Extensive root systems
  - a. retard erosion
  - b. absorbs and clears pollutants from water
4. Key to biodiversity
5. Habitat, cover, food for native animals

## Protecting from flooding-related water damage

1. Plants superior to synthetic barriers

## Example - Centennial Park

### Characteristics of Native Grasses

Common	Scientific	Sun	Part	Shade	Dry	Moist	Wet	Ht
Cherokee Sedge	<i>Carex cherokeeensis</i>	X	X	X?		X	X	1-2'
River Oats	<i>Chasmanthium latifolium</i>	X	X	X	X	X	X	3-4'
Switch Grass	<i>Panicum virgatum</i>	X				X	X	3-4'
Pink Muhly	<i>Muhlenbergia capillaris</i>	X	X			X	X	3-4'
Indian Grass	<i>Sorghastrum nutans</i>	X	X		X	X		4-6'
Big Bluestem	<i>Andropogon gerardii</i>	X			X	X		5-7'
Little Bluestem	<i>Schizachyrium scoparium</i>	X	X		X			2-4'

Data extracted from much larger table by GroWild, Fairview, TN

## Components of a shore-line zone

1. Grasses
2. Flowering plants
3. Short shrubs
4. Short trees and shrubs
5. Upland trees
  - shade – cool water
  - need not obstruct view of waterway

## Native Grasses

1. full sun
2. widely adaptable
3. relatively drought tolerant and maintenance free
4. soil conservation – retard erosion
5. roots – absorb pollutants

Cherokee Sedge - *Carex cherokeensis*

- a. **moist-wet**
- b. **1-2 feet**
- c. **sun-part - shade**
- d. spreads by seeds
- e. appropriate for mass plantings
- f. evergreen
- g. deer tolerant

River Oats – *Chasmanthium latifolium*

- a. **dry-moist-wet**
- b. **3-4 feet**
- c. **sun-part**
- d. needs room to expand
- e. tolerates transplantation
- f. remove seed heads to control

Switchgrass – *Panicum virgatum*

- a. **moist-wet**
- b. **to 8 feet** – Shenandoah shorter variety 3-4 feet
- c. **sun**

Pink Muhly Grass – *Muhlenbergia capillaris*

- a. **moist-wet**
- b. **3-4 feet**
- c. **sun**
- d. extremely adaptable, hardy, drought tolerant
- e. flowers give cloud-like appearance

Indian Grass – *Sorghastrum nutans*

- a. **dry-moist**
- b. **4-6 feet**
- c. **sun-part**
- d. tolerates some flooding

Big Bluestem – *Andropogon gerardii*

- a. **dry-moist**

- b. 5-7 feet
- c. sun
- d. turkey feet

Little Bluestem – *Schizochyrium scoparium*

- a. dry
- b. 2 – 4 feet
- c. sun-part
- d. tends to retain clumpiness
- e. needs some lateral room

## **Native Shrubs**

Button Bush – *Cephalanthus occidentalis*

- a. full sun to partial shade
- b. wet areas – rain gardens, will grow in standing water at least until fall
- c. can tolerate dry sites- irrigate during first couple of years
- d. June-September
- e. red foliage in fall- year-round interest
- f. essential food source for bees, butterflies, beneficial insects
- g. “honey balls attracts host of pollinators
- h. up to 15 feet

Silky Dogwood – *Cornus amomum*

- a. tolerates close to full shade
- b. to 9 feet
- c. moist to wet areas – along waterways
- d. good soil stabilizer
- e. mulch to keep roots moist
- f. small white flowers in clusters (4 petals)
- g. leaves, lancet-shaped, smooth edged
- i. branches may root – form thickets – may look unkempt
- j. midsummer – pale blue berries – good food source for birds

Elderberry – *Sambucus canadensis*

- a. sun to partial shade
- b. average moisture – well drained soil – intolerant of standing water
- c. important first year to provide 1 to 1.5 inches water per week
- d. Irrigate in drought
- e. bloom mid-summer –small creamy white flowers (5 petals)
- d. need **cross fertilization** but both male and female– minimum of 3 plants

American Beautyberry – *Callicarpa americana*

- a. part shade – intolerant to deep shade
- b. if sun - need to irrigate occasionally
- c. bright purple berries later in summer – only on new growth
- d. berries astringent - edible after cooking
- e. food for birds – mammals
- f. 4-5 feet, can grow to 8 feet
- g. said to be easily transplantable
- h. prune fall-winter

Black Chokeberry – *Aronia melanocarpa*

- a. full sun – part shade

- b. 6 feet
- c. fertile, moist even boggy soil – widely tolerant to soils
- d. white blooms in May
- e. black berries edible but astringent, attract native birds
- f. red in fall
- g. spread by suckers – prune every few years

Sweetshrub – *Calycanthus floridus*

- a. deep, moist, loamy soil
- b. grows more slowly in full sun, dry soil
- c. best conditions – grow 12 – 18 inches per year – 3 – 9 feet tall wide
- d. wine-red flowers in April, May, June, July
- e. fragrant sweet smell
- f. slow spreader
- g. drought tolerant
- h. leaves in Fall – golden-yellow

Virginia Sweetspire – *Itea virginica*

- a. best in full sun
- b. best presented in bunches
- d. tall shrub – to 8 feet
- c. blooms April-June
- d. flowers in white tassels – resembles bottle brush
- e. wet, wooded stream banks
- f. **provide water in droughts**
- g. purple – red foliage in fall
- h. deer resistant

## **Flowering Plants**

Blue Flag Iris – *Iris versicolor*

- a. full or partial sun
- b. 2-3 feet
- c. bloom May-July
- d. thrive in bogs, wetlands, wet-rich organic soils
- e. wet rain gardens
- f. will tolerate dry conditions
- g. poisonous

Rose Mallow - Swamp Rose Mallow– *Hibiscus moscheutos*

- a. 2-7 feet
- b. moist but not necessarily continuously wet environments (drainage ditches)
- c. marshes, lake shores
- d. warm and sunny localities
- e. rich soil
- f. mulch in winter to protect roots

Joe Pye Weed (Hollow Joe Pye Weed) – *Eupatorium maculatum*

- a. full sun to partial shade (in drier conditions best to grown in full shade)
- b. likes rich, moist soils – shaded riverbanks
- c. if not moist conditions - provide regular deep watering
- d. mulch helps keep moisture in soil

- e. flowers July to September
- f. 4–7 feet
- g. nectar attracts butterflies - monarchs and swallowtails

Foxglove Beardtongue – *Penstemon digitalis*

- a. wetland – stream edge – grows to 3-5 feet
- b. full sun to average shade
- c. roots stabilize soil
- d. prolific
- e. reddish Fall foliage
- f. attracts long-tongued butterflies and moths – hummingbirds
- g. **not the Foxglove plant – *Digitalis purpurea***

Rose or Swamp Milkweed – *Asclepias incarnata*

- a. prefers full sun
- b. moist soils
- c. leaves – monarch larvae
- d. nectar source – native bees and adult butterflies

Cut leaf coneflower – *Rudbeckia laciniata*

- a. wet sites in flood areas
- b. 3-9 feet
- c. part sun – shade
- d. not drought tolerant
- e. spread readily – not for formal gardens
- f. butterflies – birds like seeds
- g. **look for nursery sources online**

**Ferns** (shaded woodlands – no direct sun)

Royal Fern

- a. shade or limited sun – *Osmunda regalis*
- b. water edge
- c. very dense root system
- d. tolerates flooding – indicator of water-saturated soil
- e. **classygroundcovers.com**; phone 888-4-4-4678

Cinnamon Fern – *Osmundastrum cinnamomeum*

- a. damp – shaded areas
- b. water-saturated soil
- c. cinnamon-colored sporangia in spring
- d. sterile fronds to 5 feet
- e. massive root systems
- f. can see at Genesis Gardens
- g. **NatureHills.com**

**Trees – moist soils**

American Sycamore – *Plantanus occidentalis*

- a. moist but not wet locations
- b. full sun
- c. white to gray bark
- d. fast grower near water source
- e. dropping of seeds may be disliked by some

River Birch – *Betula nigra*

- a. fast growing
- b. full to partial sun

- c. showy peeling bark
- d. quite large in riverine locations
- e. commonly used as lawn tree – may be short lived

### **Sources for Native Plants**

GroWild – 7190 Hill Hughes Rd., Fairview, TN 37062 – 615-799-1910 – [www.GroWildInc.com](http://www.GroWildInc.com)

Overhill Gardens – 1404 Citico Road, Vonore, TN 37885 – 423-295-2288

Tennessee Naturescapes – 2131 Oliver Springs Highway Clinton, TN – 865-386-3905

**Obed Watershed Community Association** – see contact information below

**For additional nurseries – go to native plant nurseries in Tennessee**

### **Reference Book for Native Plants**

Horn, D. and T.Cathcart 2005. Wildflowers of Tennessee and the Ohio Valley and the

#### **Contact Information:**

Obed Watershed Community Association – OWCA, PO Box 533, Crossville, TN 38557;  
[Obedwatershed.org](http://Obedwatershed.org); phone 931-484-9033