

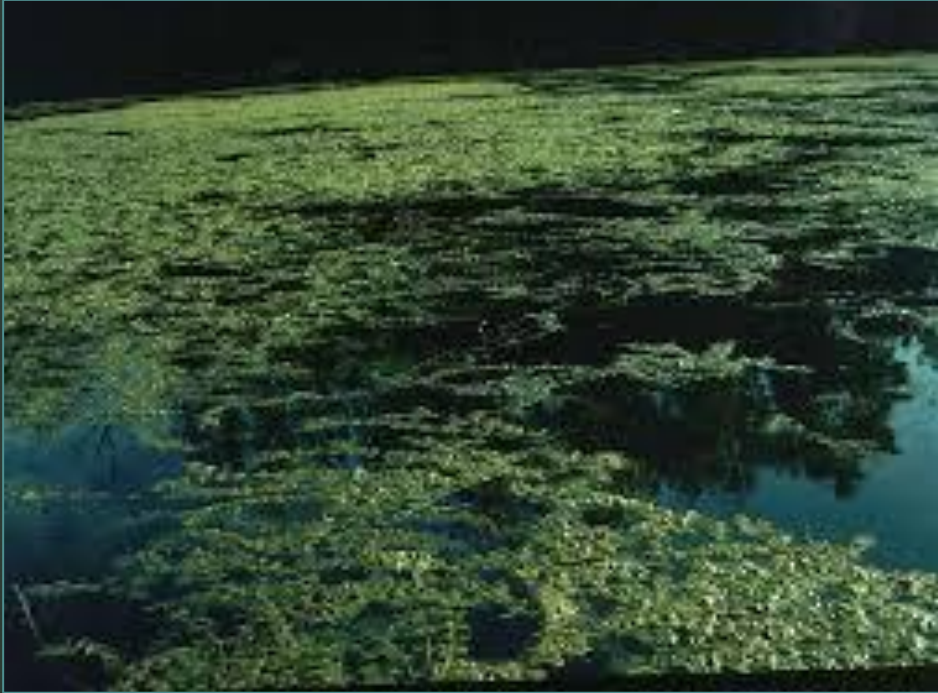


# Native Plants for freshwater shorelines

Rebecca Jacobs  
Natural Resources Program Manager  
Boothbay Region Water District

# Shores of Lake Champlain Vermont





I thought this was normal....

# Common Shorelines





# Impact of Invasive Species on Shorelines

- *Lythrum salicaria*; Purple Loosestrife
  - Alters waterways
  - Cost to manage

# Impact of Invasive Species on Shorelines

- *Phragmites australis*, Phragmites
  - Study showed hardened shorelines increase likelihood of invasives such as phragmites
  - Habitat loss

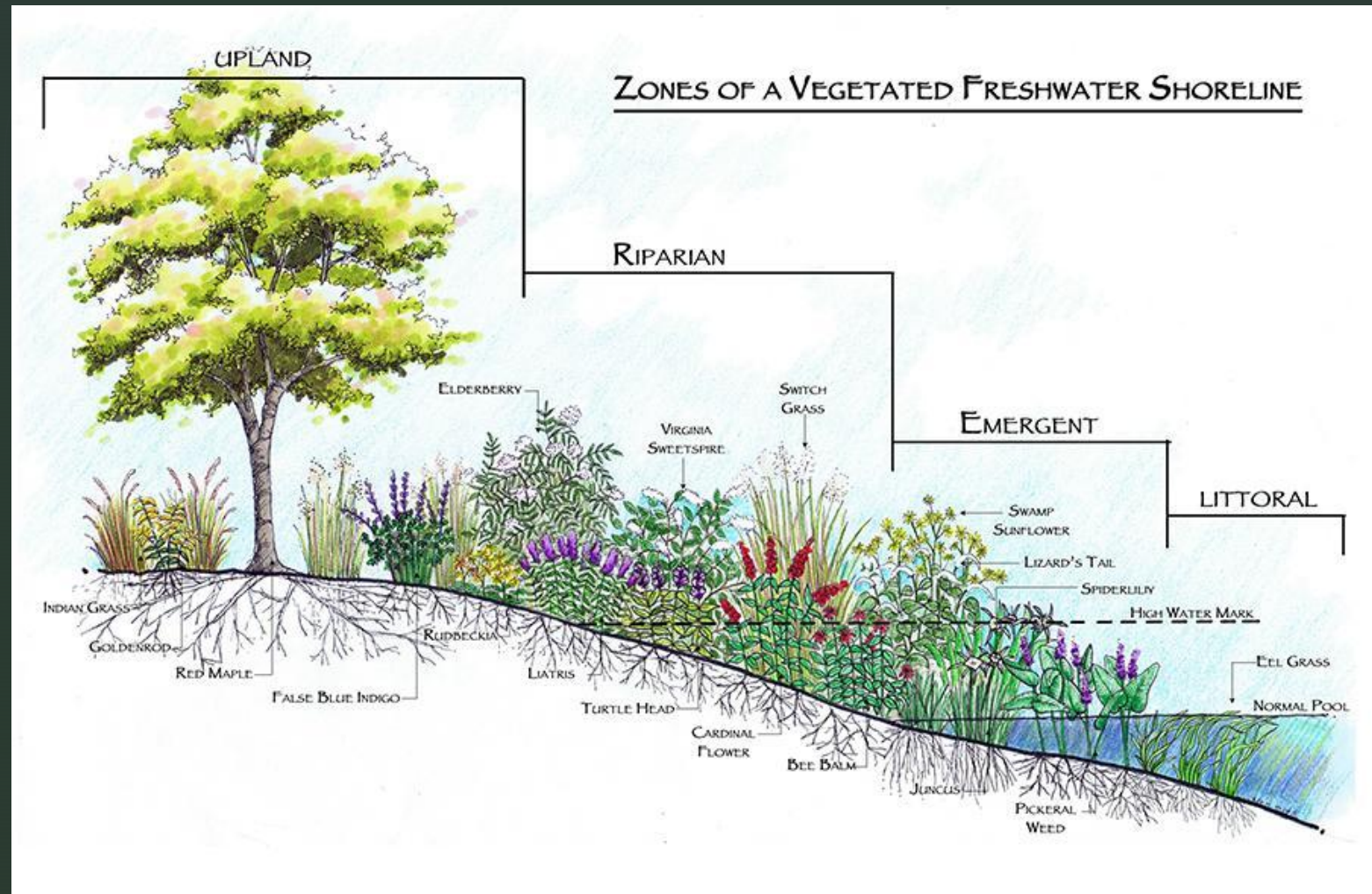


# Impact of Invasive Species on Shorelines

- *Reynoutria japonica*; Japanese Knotweed (aka: *Polygonum cuspidatum*)
  - Studies show up to 3cm more erosion on sites with knotweed than without
  - Changes hydrology
  - Infrastructure

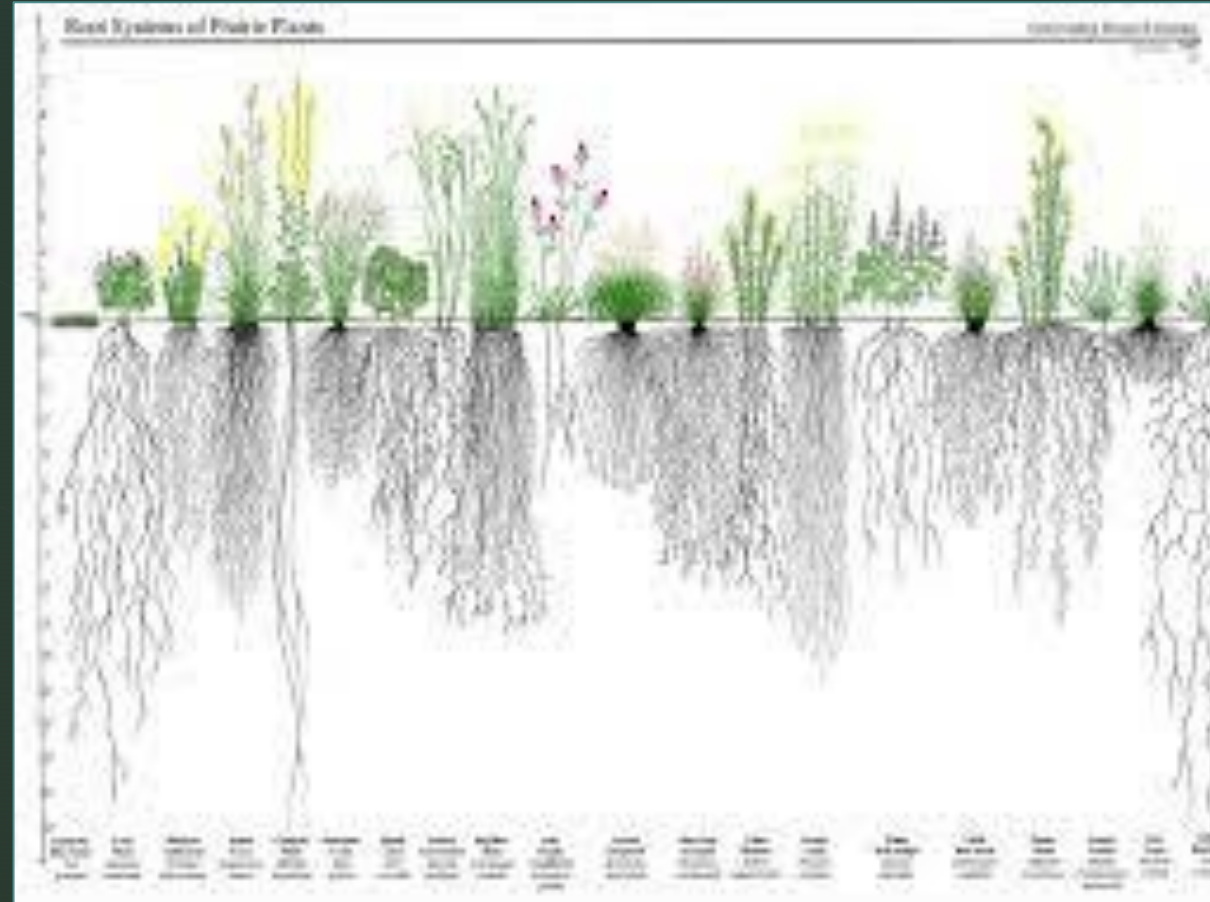


# Ecologically Stable Vegetated Freshwater Shoreline

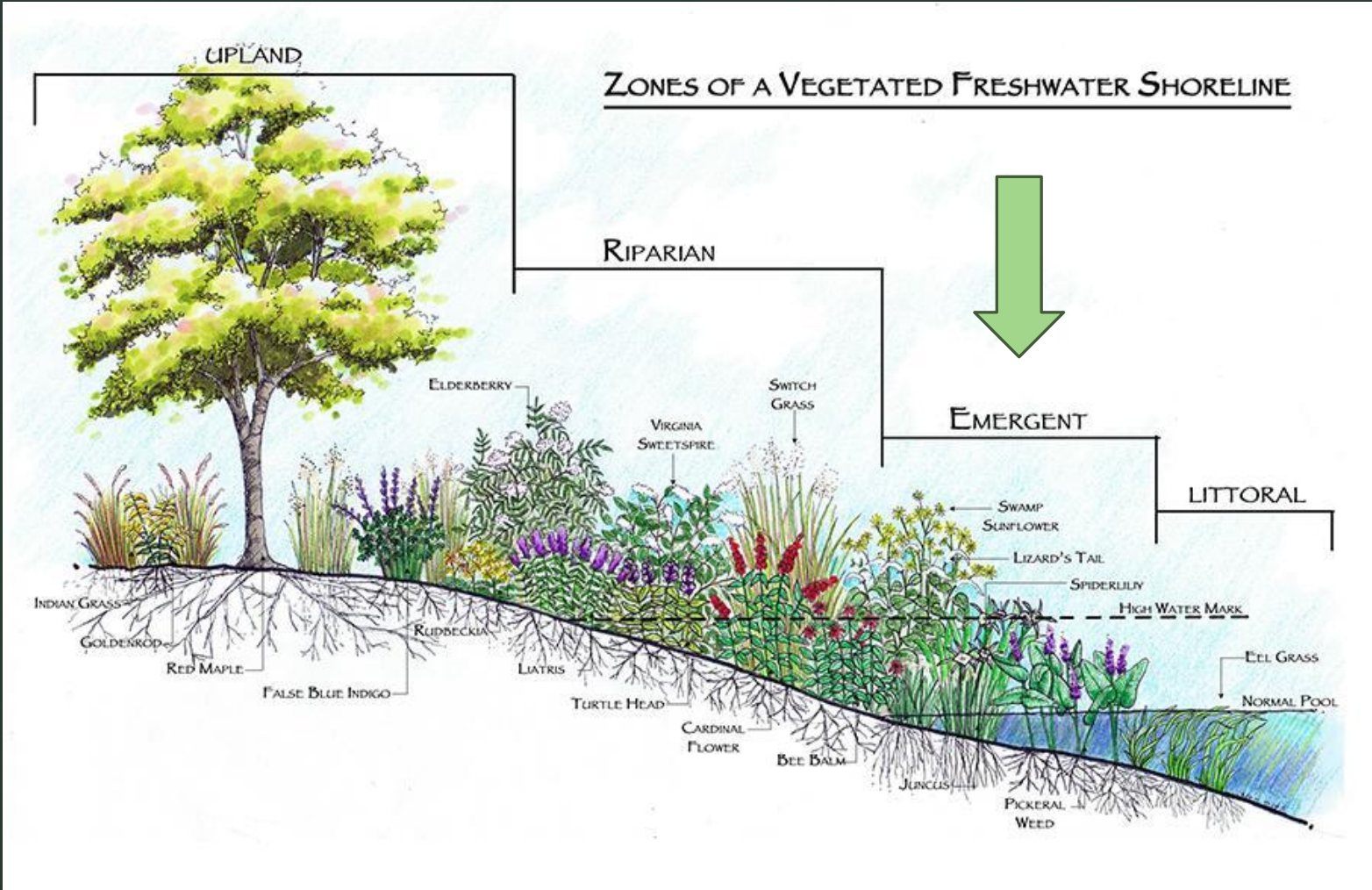


# Why Choose Native Species?

- Reduces likelihood of:
  - Loss
  - Maintenance
  - Invasion
- Increases:
  - Root structure
  - Soil retention
  - Habitat



# Emergent Zone



## Emergent Zone: Forbes

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*Aruncus dioicus*; Goat's Beard

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*Asclepias incarnata*; Red or  
Swamp Milkweed

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*Cattha palustris*; Marsh Marigold

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*Chelone glabra* and *Isonia*;  
White and Pink Turtlehead



# Emergent Zone: Forbes

*Eupatorium fistulosum* and  
*maculatum*; Joe Pye Weed and  
Boneset

*Iris versicolor*; Blue Flag Iris

*Lobelia cardinalis*; Cardinal Flower





## Emergent Zone: Shrubs

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*Alnus incana*; Speckled  
Alder

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*Cephalanthus  
occidentalis*; Buttonbush

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*Clethra alnifolia*;  
Summersweet

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*Hypericum prolificum*;  
Shrubby St John's Wort



## Emergent Zone: Shrubs



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*Ilex verticillata*; Winterberry

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*Myrica gale*; Sweetgale

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*Myrica pensylvanica*; Northern  
Baryberry

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*Rhodora canadense*; Canada  
Rosebay



# Emergent Zone: Shrubs Live Staking



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*Sambucus canadensis*; Elderberry

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*Sambucus racemosa*; Red Elderberry

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*Cornus sericea*; Red-Osier or Red-Twig  
Dogwood

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*Cornus amomum*; Silky Dogwood

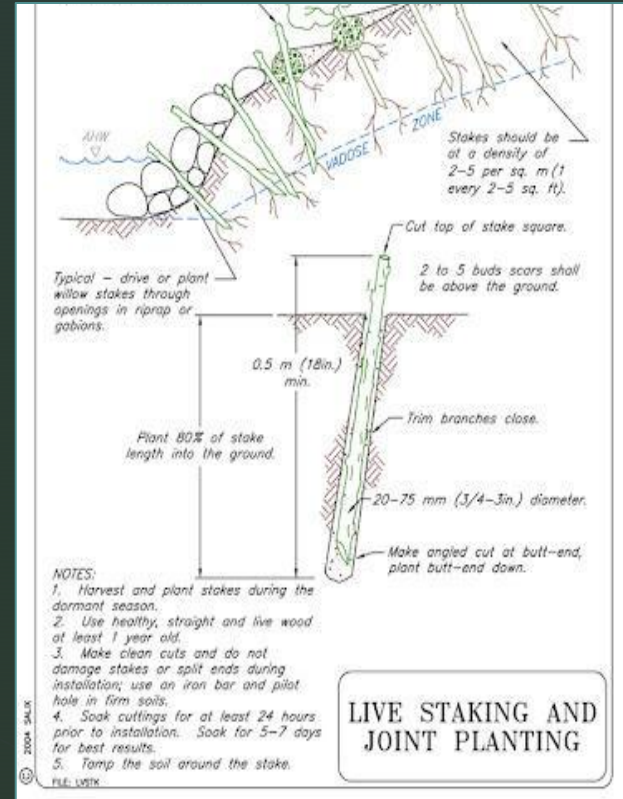
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*Cornus racemosa*; Gray Dogwood

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*Salix discolor*; Pussy Willow





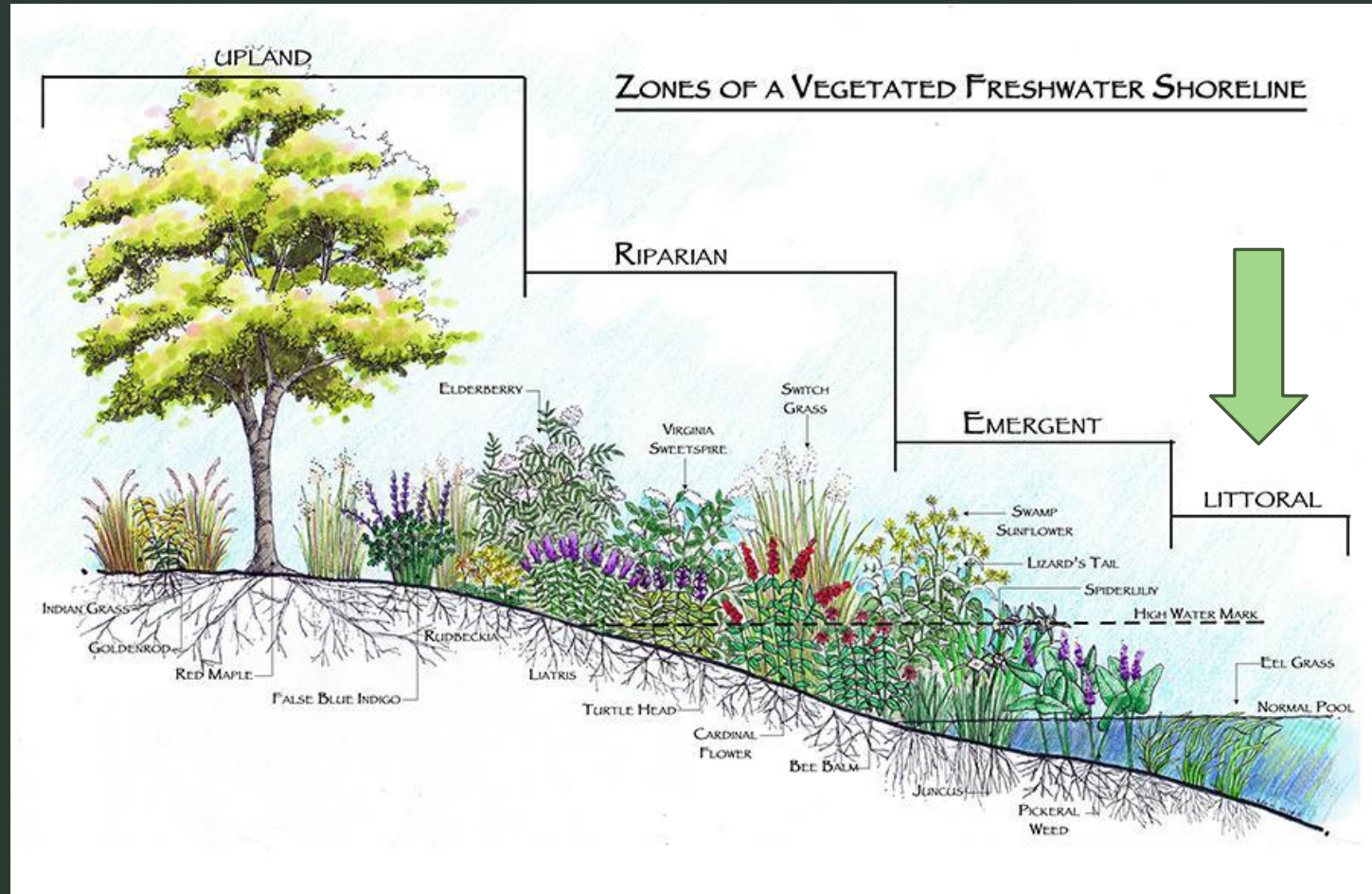
**Live Staking**  
 Cost Effective  
 Cover large areas quickly  
 Limited number of species  
 Done in Dormancy



# Emergent Zone: Trees

- *Acer rubrum*; Red Maple
- *Nyssa sylvatica*; Black Gum
- *Quercus bicolor*; Swamp White Oak

# Littoral Zone



# Plants for the Littoral Zone



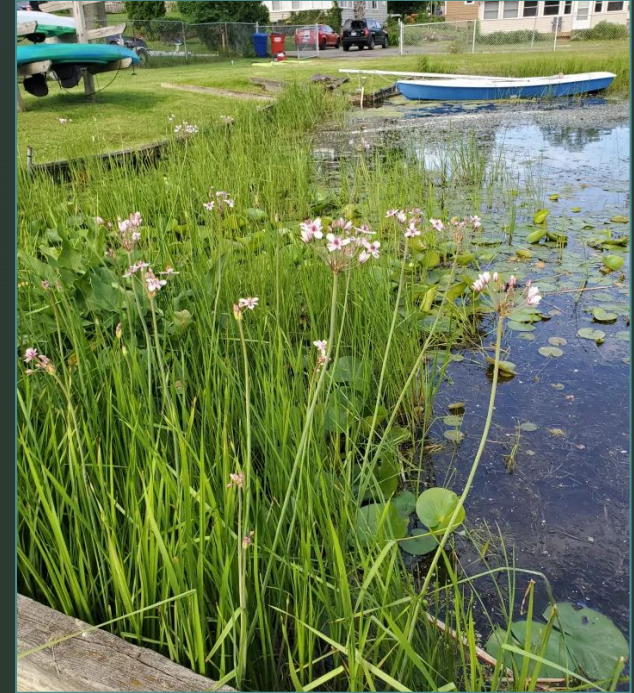
- *Asclepias incarnata*, Swamp Milkweed
- *Iris versicolor*, Blue Flag Iris
- *Sagittaria latifolia*, Arrowhead



# Plants for the Littoral Zone

- *Pontederia cordata*, Pickeral Weed
- *Sagittaria latifolia*, Arrowhead
- *Vaccinium oxycoccos*, Bog Cranberry





Consider Grasses, Sedges and Rushes

# Tips and Tricks for Successful Plantings in Emergent and Littoral Zones

- Do your research—not all natives are readily available to buy!
- Peat Pots
- Coir Logs
- Planting Baskets



# Tips and Tricks for Successful Plantings in Emergent and Littoral Zones

Coir mats and plug sized plants



# Thank You!

Rebecca Jacobs

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