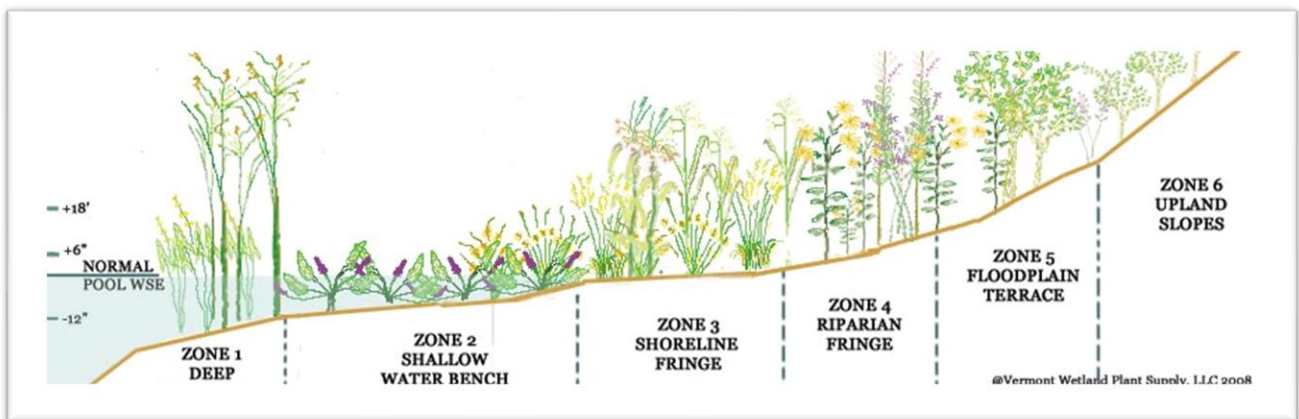


Pond Planting Proposal

Goal: The goal of installing aquatic plants is to:

- Stabilize shoreline and reduce turf migration
- Sequester nitrates, nitrites, and phosphates which naturally leech into the pond & contribute to algae and water quality problems
- Create shade and habitat for turtles, fish, amphibians, birds, and pollinators
- Increase the aesthetic nature of the pond



Zone Map: This guide is organized based on which zone the plant thrives in. Zone 1 covers deep water plants, zone 2 covers shallow water plants, zone 3 covers shoreline plants, and zone 4 covers fringe plants. Most aquatic plants can exist in multiple zones, making their placement location in a water body flexible. For easy access, each zone will be color coded, with zone 1 being yellow, zone 2 being red, zone 3 being green, and zone 4 being blue.

Average Annual Extreme Minimum Temperature 1976-2005

Temp (F)	Zone	Temp (C)
-60 to -50	1	-51.1 to -45.6
-50 to -40	2	-45.6 to -40
-40 to -30	3	-40 to -34.4
-30 to -20	4	-34.4 to -28.9
-20 to -10	5	-28.9 to -23.3
-10 to 0	6	-23.3 to -17.8
0 to 10	7	-17.8 to -12.2
10 to 20	8	-12.2 to -6.7
20 to 30	9	-6.7 to -1.1
30 to 40	10	-1.1 to 4.4
40 to 50	11	4.4 to 10
50 to 60	12	10 to 15.6
60 to 70	13	15.6 to 21.1

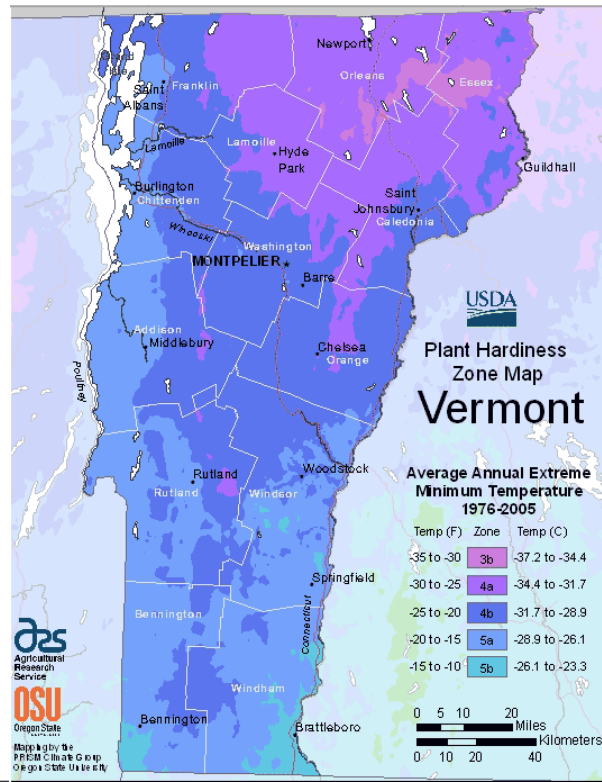


Photo by USDA ©, 2023

Photo by USDA ©, 2023

Vermont Plant Hardiness Zone Map: A plant's hardiness is a measure of how resilient they are to cold temperatures during the winter. The USDA provides a zone map to find out what the average lowest temperature is in an area, which helps finding out if plants will survive in that area during the winter.



Proposed Species:

Wild Rice (*Zizania Aquatica*)



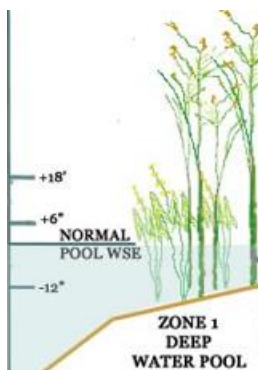
Photo by Alan Cressler ©, 2023



Photo by Alan Cressler ©, 2023

Benefits:

- Native Species, hardiness compatible
- Attracts birds and provides them with food
- Nutrient sequestration, erosion control
- Liner friendly and perennial
- Stems can be up to 15 feet tall, but only a few feet are emergent
- Seeds are edible



Arrow Arum (*Peltandra Virginica*)

Photo by Vermont Wetland Plants Supply ©, 2023





Photo by Alan Cressler ©, 2023



Photo by Sally and Andy Wasowski ©, 2023

Benefits:

- Native Species, hardiness compatible
- Provides food and habitat for ducks and turtles
- Nutrient sequestration, erosion control
- Discrete and small yellow berries, grows 2-3 feet tall
- Liner friendly and perennial

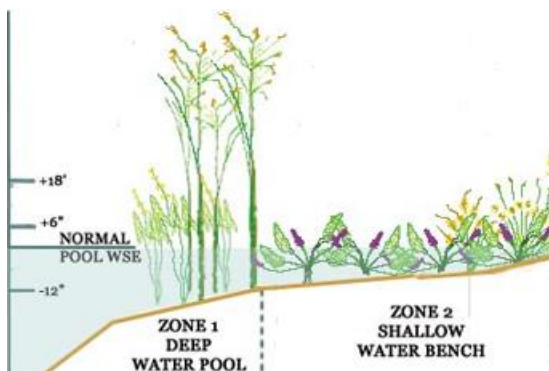



Photo by Vermont Wetland Plants Supply ©, 2023



 **Pickereelweed** (*Pontederia cordata*)

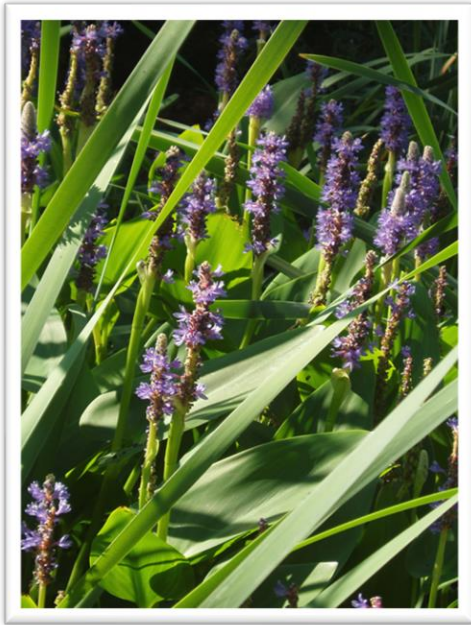


Photo by Julie Makin ©, 2023



Photo by Albert Vick ©, 2023

Benefits:

- Native Species, hardiness compatible
- Shade and Habitat for turtles and amphibians, attracts birds
- Nutrient sequestration, erosion control
- Purple Flowering spikes throughout the summer
- Seeds can be eaten straight from the plant
- Usually grows 3-4 feet tall

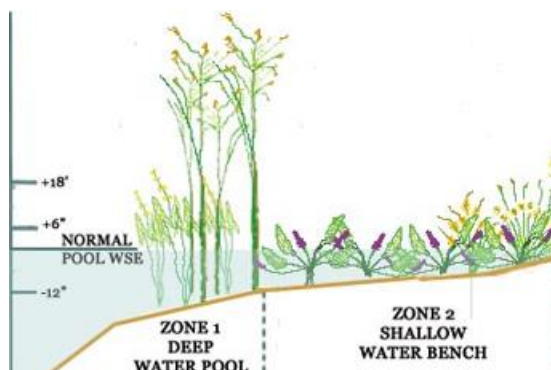



Photo by Vermont Wetland Plants Supply ©, 2023



 **Broadleaf Arrowhead** (*Sagittaria latifolia*)

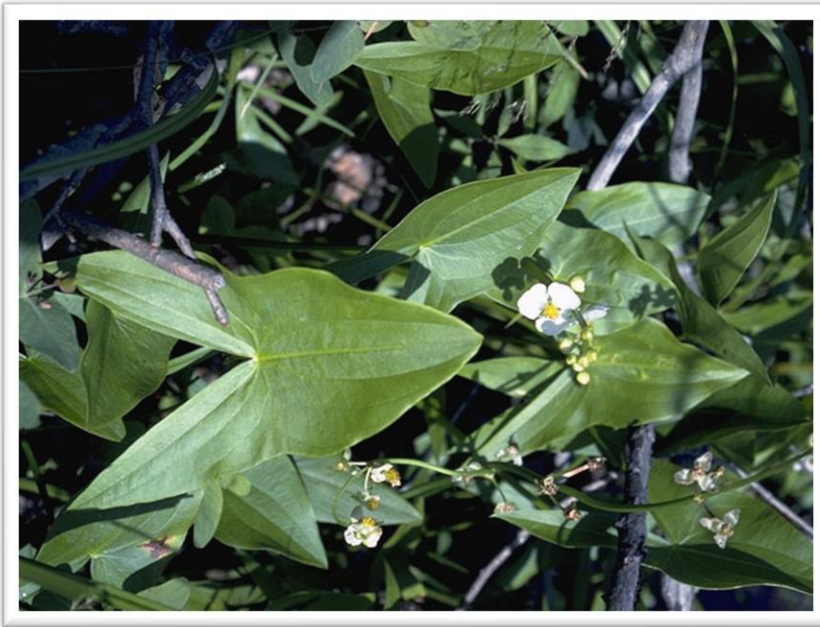


Photo by Dolphia Bransford ©, 2023



Photo by Albert Vick ©, 2023

Benefits:

- Native Species, hardiness compatible
- Nutrient sequestration, erosion control
- Perennial, grows to around 3 feet tall
- Leaves and underground stems are edible
- Attracts pollinators and songbirds

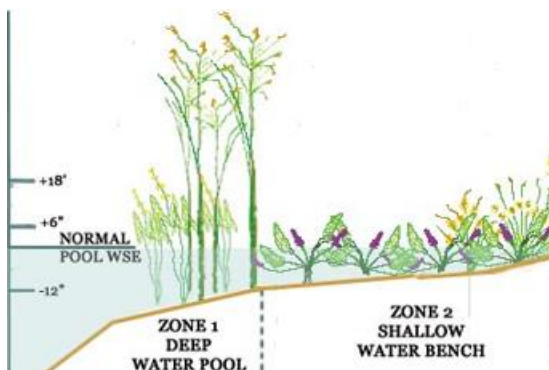


Photo by Vermont Wetland Plants Supply ©, 2023



Hardstem Bulrush (*Schoenoplectus acutus*)

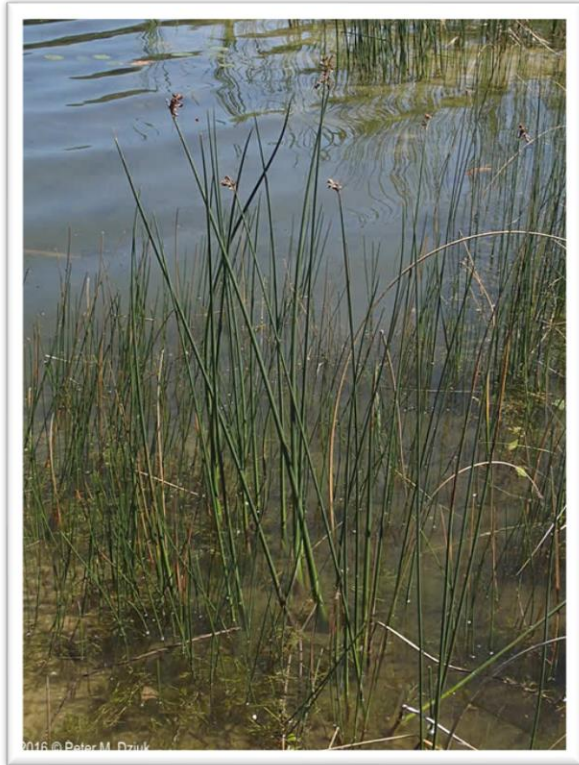


Photo by Peter Dzuik ©, 2023

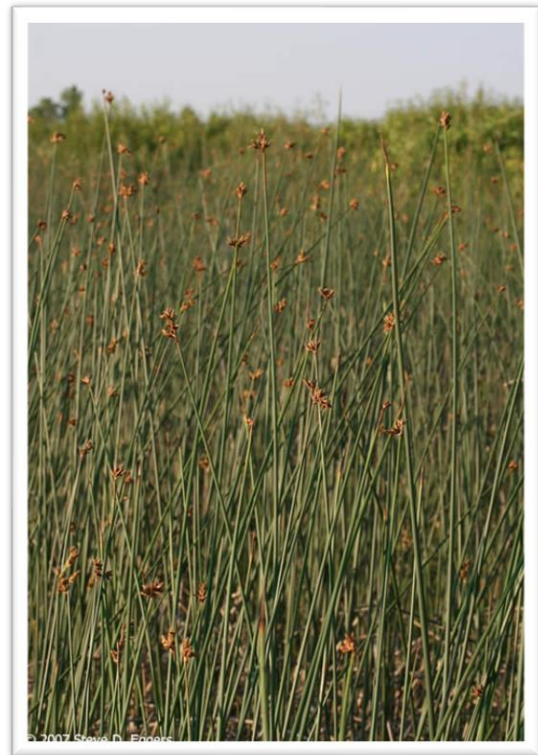


Photo by Steve Eggers ©, 2023

Benefits:

- Native Species, hardiness compatible
- Nutrient sequestration, erosion control
- Produces a small fruit and grows from 3-9 feet tall
- Liner friendly and perennial

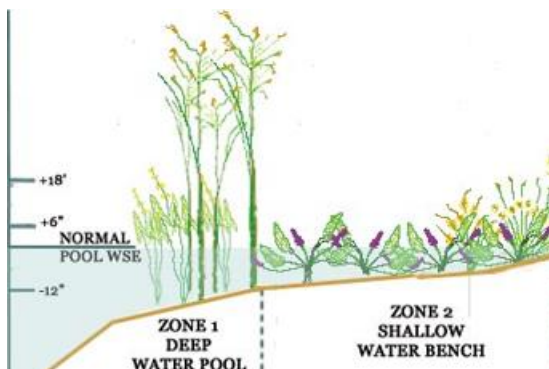


Photo by Vermont Wetland Plants Supply ©, 2023




 **River Bulrush** (*Bolboschoenus fluviatilis*)



Photo by Katy Chayka ©, 2023



Photo by Peter Dzuik ©, 2023

Benefits:

- Native Species, hardiness compatible
- Nutrient sequestration, erosion control
- Produces a small fruit, usually 3-6 feet tall
- Liner friendly and perennial

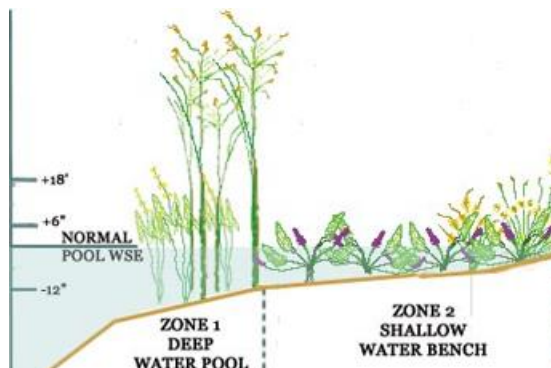


Photo by Vermont Wetland Plants Supply ©, 2023



Threesquare (*Schoenoplectus pungens*)



Photo by R.W. Smith ©, 2023

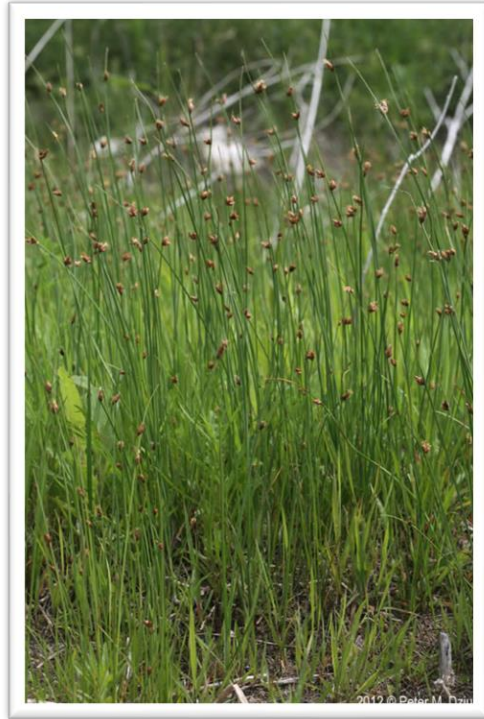


Photo by Peter Dzuik ©, 2023

Benefits:

- Native Species, hardiness compatible
- Nutrient sequestration, erosion control
- Grows 1-6 feet tall
- Stems provide habitat for macroinvertebrates
- Liner friendly and perennial

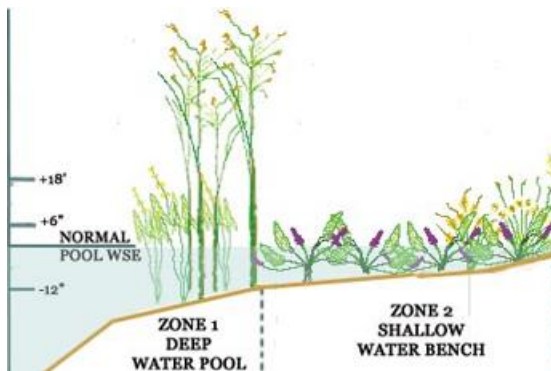


Photo by Vermont Wetland Plants Supply ©, 2023




 **Soft-stem Bulrush** (*Schoenoplectus tabernaemontanii*)



Photo by R.W. Smith ©, 2023



Photo by Sally and Andy Wasowski ©, 2023

Benefits:

- Native Species, hardiness compatible
- Nutrient sequestration, erosion control
- Protect other aquatic plants from current and wind
- Attracts birds
- Liner friendly and perennial
- Grows 2-9 feet tall

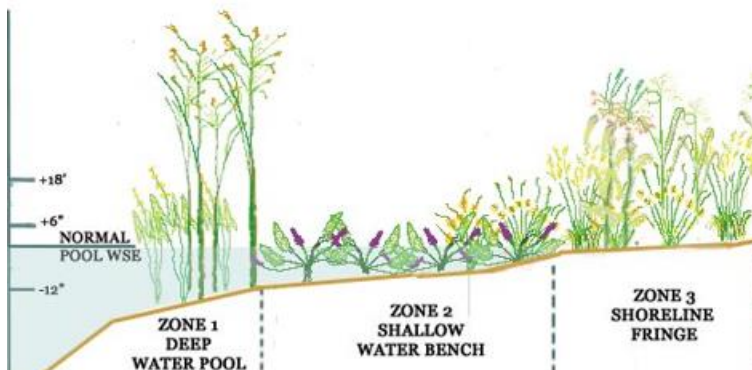


Photo by Vermont Wetland Plants Supply ©, 2023



 **Narrowleaf Cattail** (*Typha angustifolia*)

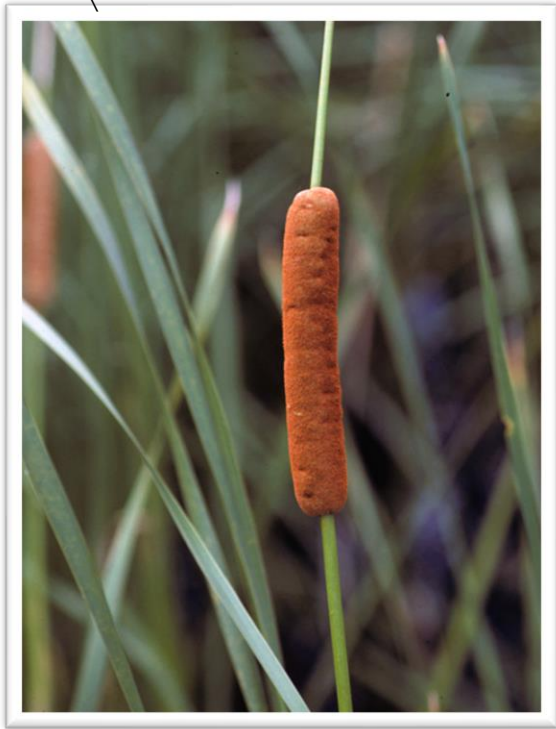


Photo by Sally and Andy Wasowski ©, 2023



Photo by George Brusco ©, 2023

Benefits:

- Native Species, hardiness compatible, and perennial
- Nutrient sequestration, erosion control
- Provides nesting area for wetland animals and birds
- Grows up to 10 feet tall

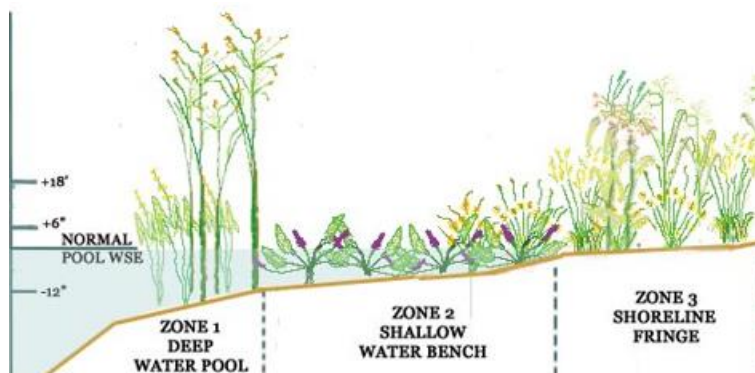


Photo by Vermont Wetland Plants Supply ©, 2023



 **Broadleaf Cattail** (*Typha latifolia*)



Photo by James Reveal ©, 2023



Photo by James Reveal ©, 2023

Benefits:

- Native Species, hardiness compatible, and perennial
- Nutrient sequestration, erosion control
- Attracts birds and resists deer
- Unique flower that sticks out
- Grows 4-10 feet tall

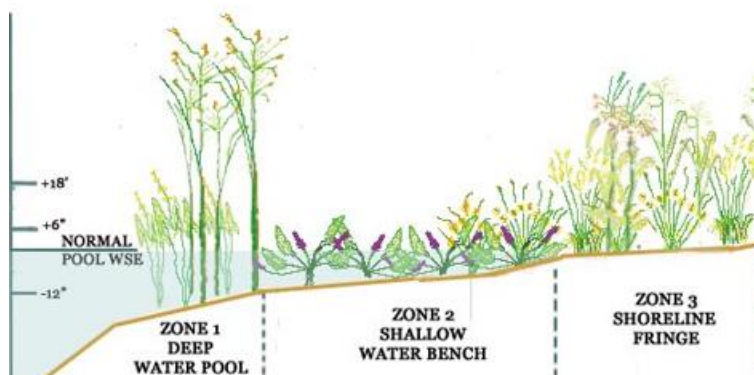


Photo by Vermont Wetland Plants Supply ©, 2023



Broadfruited bur-reed (*Sparganium euycarpum*)



Photo by R.W. Smith ©, 2023



Photo by Peter Dzuik ©, 2023

Benefits:

- Native Species, hardiness compatible
- Nutrient sequestration, erosion control
- Flowers can bloom into different colors
- Liner friendly and perennial
- Grows up to 8 feet tall, usually shorter

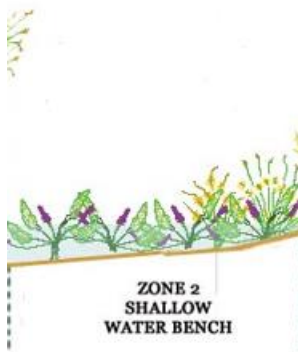


Photo by Vermont Wetland Plants Supply ©, 2023




 **Sweet Flag** (*Acorus americana*)



Photo by R.W. Smith ©, 2023



Photo by Katy Chayka ©, 2023

Benefits:

- Native Species, hardiness compatible
- Pollinator friendly, often an insect larval nursery
- Nutrient sequestration, erosion control especially of fine sediments
- Yellow Flower Spike attractive to birds and insects
- Perennial and grows up to 6 feet tall

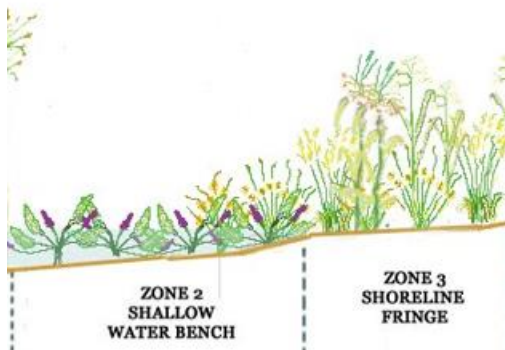


Photo by Vermont Wetland Plants Supply ©, 2023



 **Northern Water Plantain** (*Alisma subcordatum*)



Photo by Alan Cressler ©, 2023



Photo by Alan Cressler ©, 2023

Benefits:

- Native Species, hardiness compatible
- Nutrient sequestration, erosion control
- Small flower that can be pink or white
- Perennial, grows up to 2 feet tall

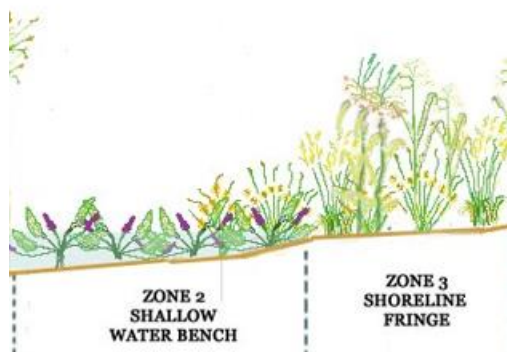


Photo by Vermont Wetland Plants Supply ©, 2023



 **Pink / Swamp Milkweed** (*Asclepias incarnata*)



Photo by Stephanie Brundage ©, 2023



Photo by Sally and Andy Wasowski ©, 2023

Benefits:

- Native Species, hardiness compatible
- Pollinator friendly, perennial, Monarch Butterfly food source
- Vinyl Liner Friendly rooting system
- Nutrient sequestration, erosion control
- Pinkish white to Maroon flowerets blooming in dense clusters, stems up to 3' tall, forms beds

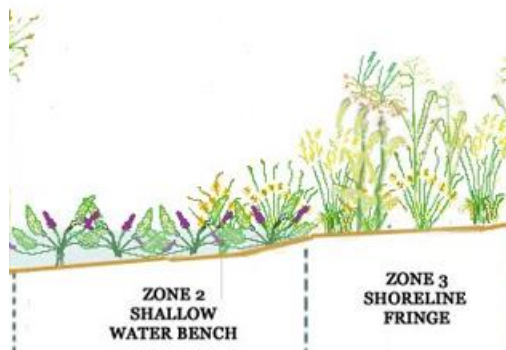


Photo by Vermont Wetland Plants Supply ©, 2023




 **Nodding Beggartick** (*Bidens cernua*)



Photo by R.W. Smith ©, 2023



Photo by Dolphia and W.D. Bransford ©, 2023

Benefits:

- Native Species, hardiness compatible
- Nutrient sequestration, erosion control
- Pretty flower that attracts birds
- Usually around 3 feet tall
- **SPECIAL SIGNIFICANCE FOR BEES**

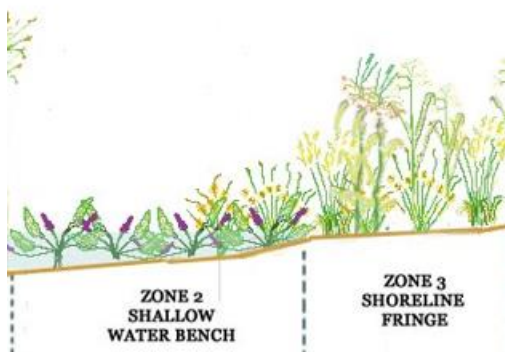


Photo by Vermont Wetland Plants Supply ©, 2023



 **Devil's Beggartick** (*Bidens frondosa*)



Photo by Alan Cressler ©, 2023

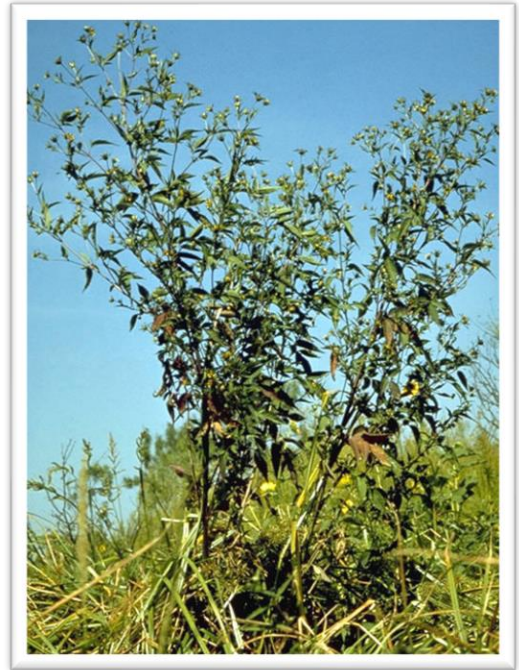


Photo by David Northington ©, 2023

Benefits:

- Native Species, hardiness compatible
- Supports native bees and other insects
- Grows up to 6 feet tall, usually much shorter
- Nutrient Sequestration, erosion control

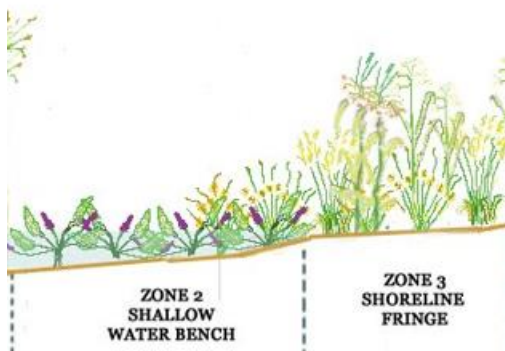


Photo by Vermont Wetland Plants Supply ©, 2023



 **Bluejoint** (*Spartanium euycarpum*)

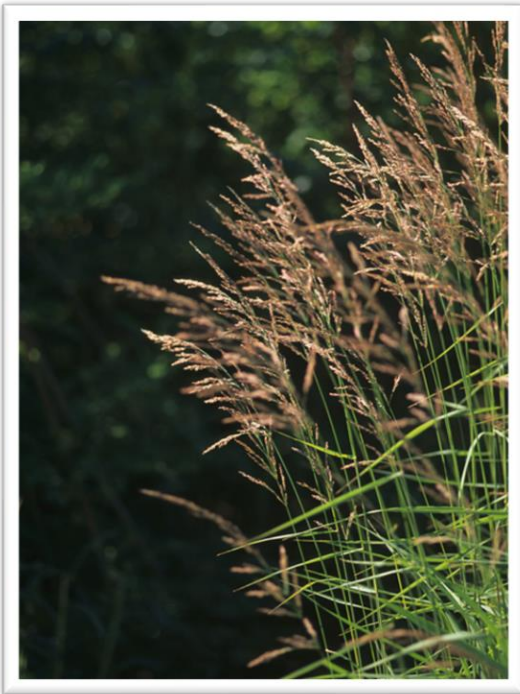


Photo by Sally and Andy Wasowski ©, 2023



Photo by Peter Dzuik ©, 2023

Benefits:

- Native Species, hardiness compatible
- Perennial, forms a dense bush that can be 2-5 feet tall
- Can be a food source for cattle and horses
- Provides nesting spaces for birds and protects other wildlife
- Nutrient Sequestration, erosion control

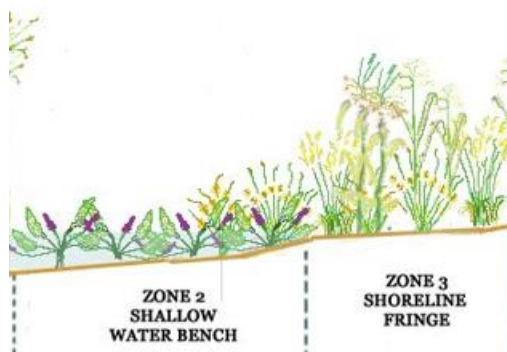


Photo by Vermont Wetland Plants Supply ©, 2023




 **Marsh Marigold** (*Caltha palustris*)



Photo by Alan Cressler ©, 2023



Photo by James Reveal ©, 2023

Benefits:

- Native Species, hardiness compatible
- Nutrient sequestration, erosion control
- Pretty flower that grows 1-2 feet tall
- Perennial and very easy to grow
- Attracts birds

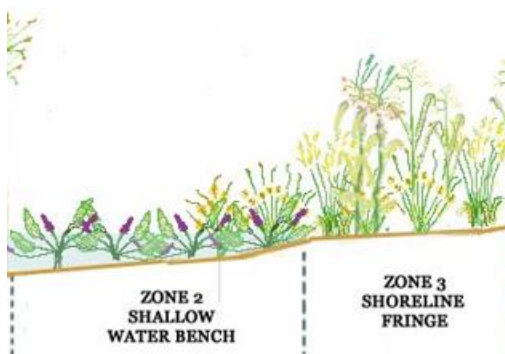


Photo by Vermont Wetland Plants Supply ©, 2023




 **Longhair sedge** (*Carex comosa*)



Photo by R.W. Smith ©, 2023



Photo by R.W. Smith ©, 2023

Benefits:

- Native Species, hardiness compatible
- Nutrient sequestration, erosion control
- Spikes can be white, green, or brown
- Liner friendly and perennial
- Perennial, grows 2-3.5 feet tall
- Provides food for wetland birds

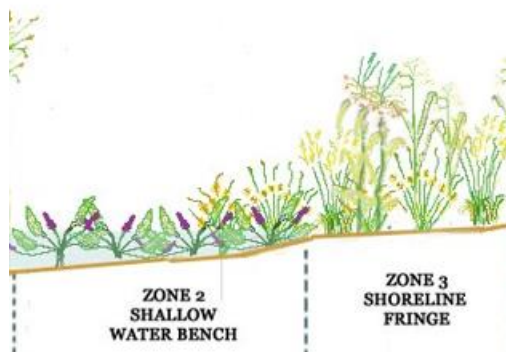


Photo by Vermont Wetland Plants Supply ©, 2023




 **Fringed Sedge** (*Carex crinita*)



Photo by Peter Dzuik ©, 2023



Photo by Peter Dzuik ©, 2023

Benefits:

- Native Species, hardiness compatible
- Nutrient sequestration, erosion control
- Supports native insects
- Liner friendly and perennial
- Grows up to 5 feet tall

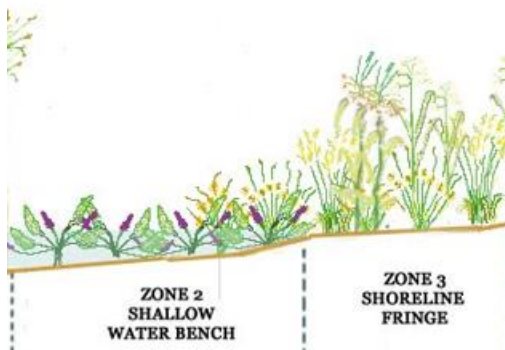


Photo by Vermont Wetland Plants Supply ©, 2023




 **Lake Sedge** (*Carex lacustris*)



Photo by R.W. Smith ©, 2023



Photo by Alan Cressler ©, 2023

Benefits:

- Native Species, hardiness compatible
- Nutrient sequestration, erosion control
- Maroon spikes that can be 2.5-4 feet tall
- Liner friendly and perennial
- Supports native insects, birds, and other animals

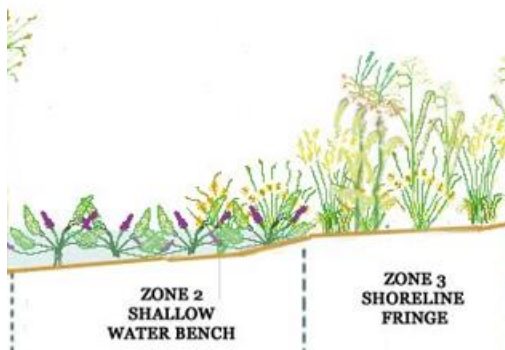


Photo by Vermont Wetland Plants Supply ©, 2023




 **Hop Sedge** (*Carex lupulina*)



Photo by R.W. Smith ©, 2023



Photo by Steven Eggers ©, 2023

Benefits:

- Native Species, hardiness compatible
- Nutrient sequestration, erosion control
- Short green spikes
- Liner friendly and perennial
- Grows 1.5-3.25 feet tall
- Supports native insects and marine animals

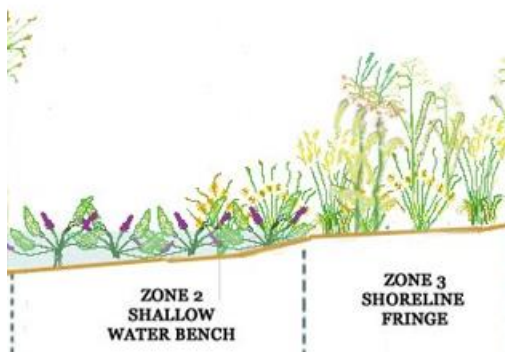


Photo by Vermont Wetland Plants Supply ©, 2023



 **Shallow Sedge** (*Carex lurida*)



Photo by R.W. Smith ©, 2023

Benefits:

- Native Species, hardiness compatible
- Nutrient sequestration, erosion control
- Attracts birds
- Liner friendly and perennial
- Grows to about 3.5 feet tall

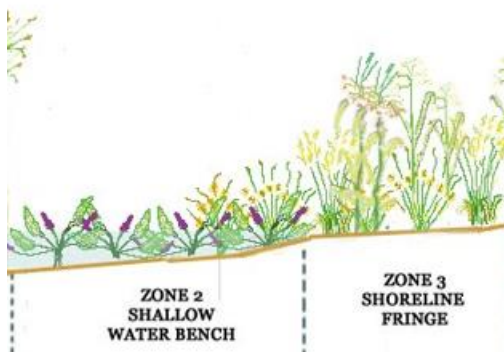


Photo by Vermont Wetland Plants Supply ©, 2023




 **Marsh Blazing Star** (*Liatris spicata*)



Photo by Will Stuart ©, 2023



Photo by Stephanie Brundage ©, 2023

Benefits:

- Native Species, hardiness compatible, drought resistant, perennial
- **SPECIAL SIGNIFICANCE FOR BEES**
- Nutrient sequestration, erosion control in the terrace around the pond
- Hummingbird and pollinator attractant
- Forms a bush of purple flower spikes that can be 2-6 feet tall

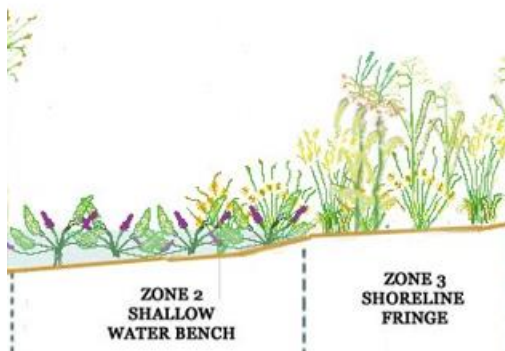


Photo by Vermont Wetland Plants Supply ©, 2023




 **White Turtlehead** (*Chelone glabra* L.)



Photo by Alan Cressler ©, 2023



Photo by Stephanie Brundage ©, 2023

Benefits:

- Native Species, hardiness compatible, perennial
- Pollinator friendly, Hummingbird friendly, Monarch Butterfly Food source, larval habitat
- Vinyl Liner Friendly rooting system
- Nutrient sequestration, erosion control
- Pinkish white to reddish flowers with unique shape, 2-4' Flower spikes

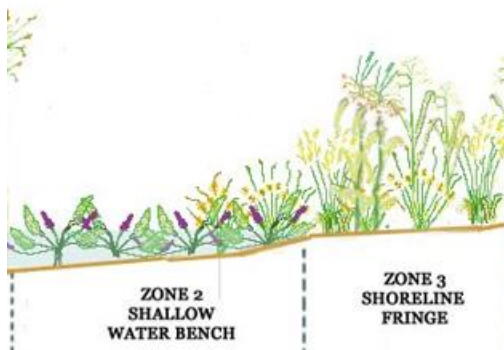


Photo by Vermont Wetland Plants Supply ©, 2023




 **Broom Sedge** (*Carex scoparia*)



Photo by Steve Eggers ©, 2023

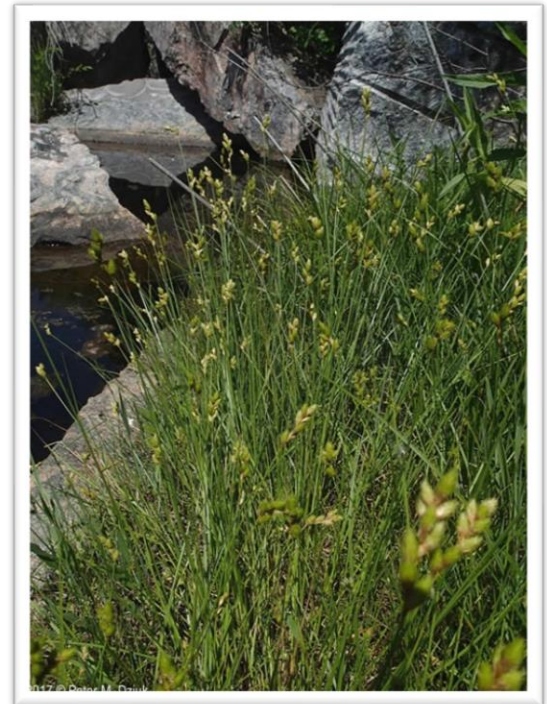


Photo by Peter Dzuik ©, 2023

Benefits:

- Native Species, hardiness compatible
- Nutrient sequestration, erosion control
- Thrives in wetlands
- Perennial, Grows from 1-3 feet tall

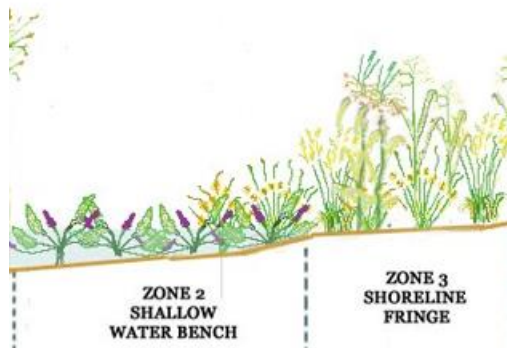


Photo by Vermont Wetland Plants Supply ©, 2023



 **Tussock Sedge** (*Carex stricta*)



Photo by R.W. Smith ©, 2023



Photo by Katy Chayka ©, 2023

Benefits:

- Native Species, hardiness compatible
- Nutrient sequestration, erosion control
- Attracts birds and butterflies feet
- Perennial, Grows to about 3.5 tall

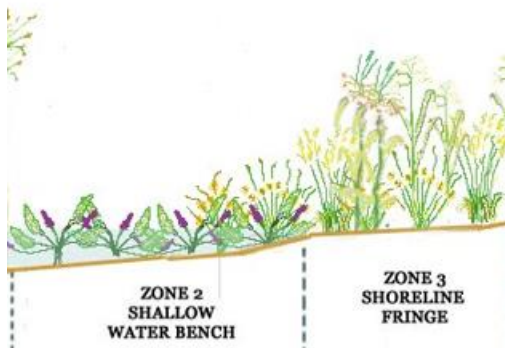


Photo by Vermont Wetland Plants Supply ©, 2023




 **Marsh Spikerush** (*Eleocharis palustris*)



Photo by Peter Dzuik ©, 2023



Photo by R.W. Smith ©, 2023

Benefits:

- Native Species, hardiness compatible
- Nutrient sequestration, erosion control
- Perennial, grows from 4-40 in. tall
- Works as a shore stabilizer

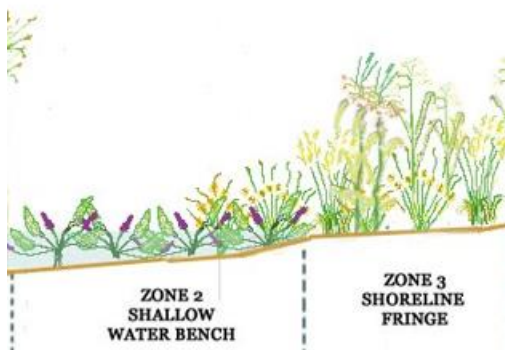


Photo by Vermont Wetland Plants Supply ©, 2023




 **Purpleleaf Willowherb** (*Epilobium coloratum*)



Photo by Katy Chayka ©, 2023



Photo by Peter Dzuik ©, 2023

Benefits:

- Native Species, hardiness compatible
- Nutrient sequestration, erosion control
- Perennial, grows from 1-3 feet tall
- Forms a bush of small white flowers

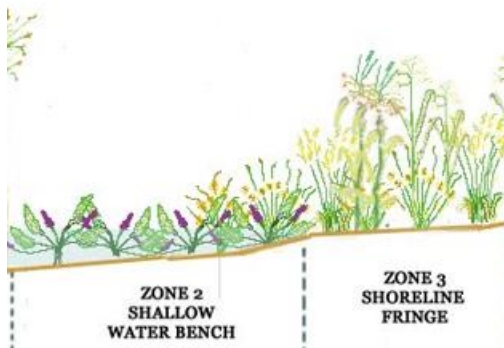


Photo by Vermont Wetland Plants Supply ©, 2023




 **Boneset** (*Eupatorium perfoliatum*)



Photo by Sally and Andy Wasowski ©, 2023



Photo by Stephanie Brundage ©, 2023

Benefits:

- Native Species, hardiness compatible
- Nutrient sequestration, erosion control
- **SPECIAL VALUE TO BEES**
- Supports biological control of pest insects
- Attracts birds and butterflies
- Perennial, grows from 3-6 feet tall
- Forms a head of white and yellowish flowers

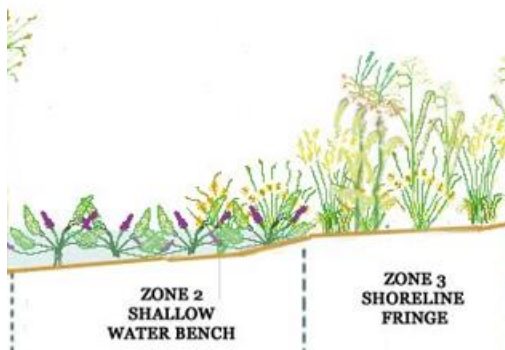


Photo by Vermont Wetland Plants Supply ©, 2023




 **Rattlesnake Mannagrass** (*Glyceria canadensis*)



Photo by Katy Chayka ©, 2023



Photo by Peter Dzuik ©, 2023

Benefits:

- Native Species, hardiness compatible
- Nutrient sequestration, erosion control
- Perennial, grows from 2-5 feet tall
- Flowering head is shaped like a small rattlesnake tail

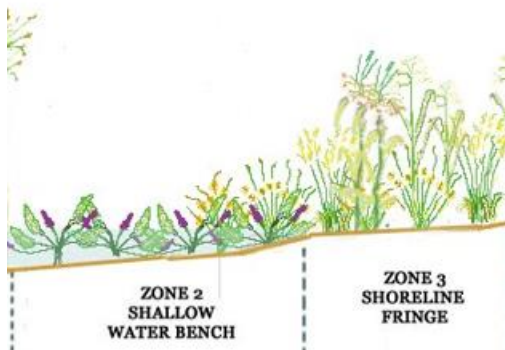


Photo by Vermont Wetland Plants Supply ©, 2023




 **Fowl Mannagrass** (*Glyceria striata*)



Photo by Sally and Andy Wasowski ©, 2023



Photo by R.W. Smith ©, 2023

Benefits:

- Native Species, hardiness compatible
- Nutrient sequestration, erosion control
- Large bushes provide cover for wildlife
- Perennial, grows from 2-3.5 tall

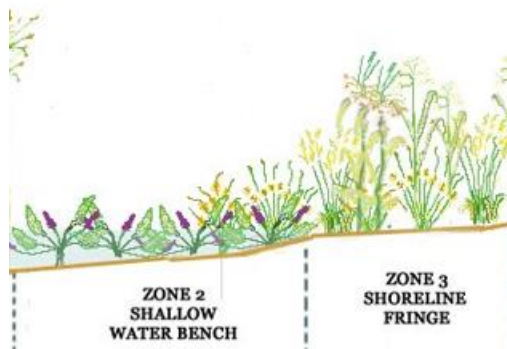


Photo by Vermont Wetland Plants Supply ©, 2023



 **Harlequin Blueflag** (*Iris versicolor*)



Photo by Albert Vick ©, 2023



Photo by John Hixson ©, 2023

Benefits:

- Native Species, hardiness compatible
- Nutrient sequestration, erosion control
- Uniquely shaped blue and purple flower
- Attracts birds and hummingbirds
- Perennial, grows 2-3 feet tall

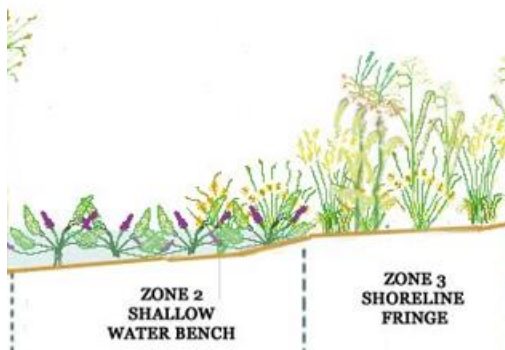


Photo by Vermont Wetland Plants Supply ©, 2023



 **Rice Cutgrass** (*Leersia oryzoides*)



Photo by R.W. Smith ©, 2023



Photo by Peter Dziuk ©, 2023

Benefits:

- Native Species, hardiness compatible
- Nutrient sequestration, erosion control
- Attracts birds and butterflies
- Perennial, grows 2.5-5 feet tall

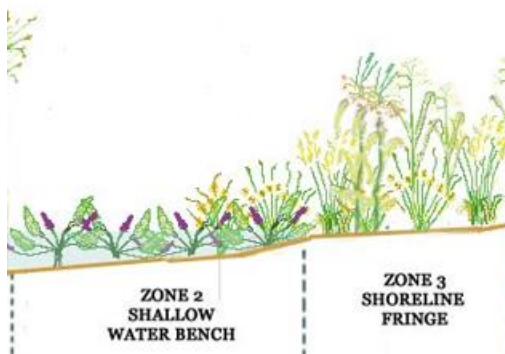


Photo by Vermont Wetland Plants Supply ©, 2023




 **Monkeyflower** (*Mimulus ringens*)



Photo by Thomas Muller ©, 2023

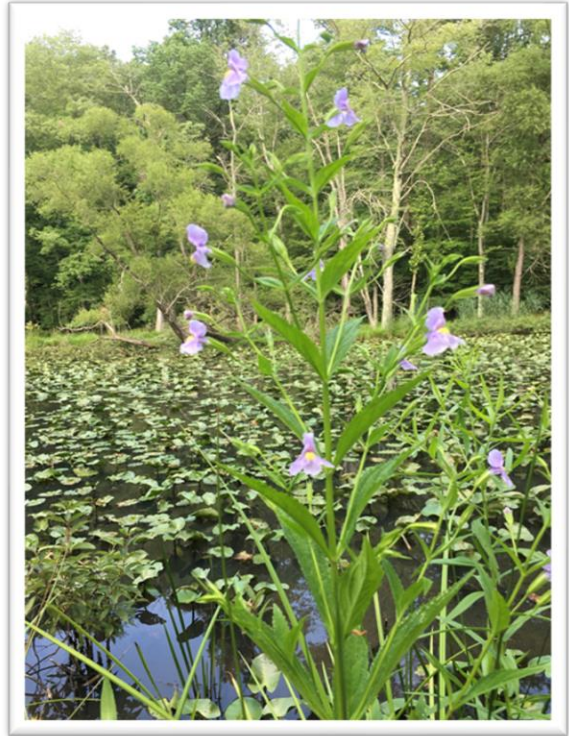


Photo by Thomas Muller ©, 2023

Benefits:

- Native Species, hardiness compatible
- Nutrient sequestration, erosion control
- Flowers can grow to be red, pink, blue, or purple
- Perennial, grows 1-3 feet tall

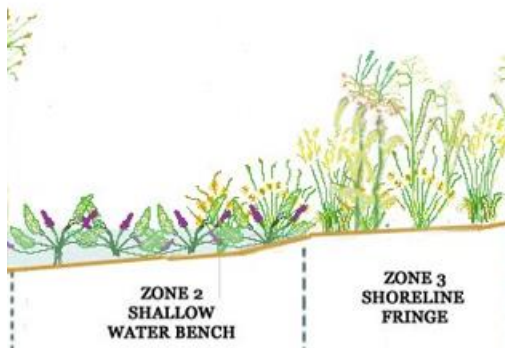


Photo by Vermont Wetland Plants Supply ©, 2023




 **American Bur-reed** (*Sparganium americanum*)



Photo by R.W. Smith ©, 2023



Photo by Alan Cressler ©, 2023

Benefits:

- Native Species, hardiness compatible
- Nutrient sequestration, erosion control
- Attracts birds and insects
- Perennial, grows 1-3 feet tall
- Forms a chain of green reeds with white spikes

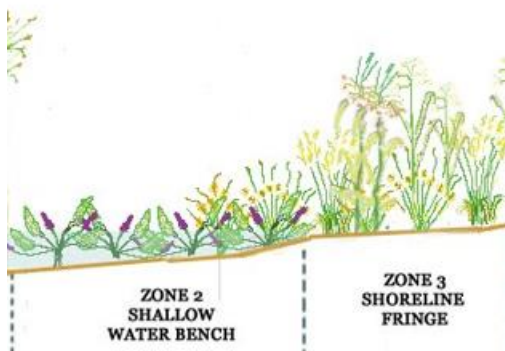


Photo by Vermont Wetland Plants Supply ©, 2023



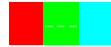
 **Canada Rush** (*Juncus Canadensis*)



Photo by R.W. Smith ©, 2023



Photo by Katy Chayka ©, 2023

Benefits:

- Native Species, hardiness compatible
- Nutrient sequestration, erosion control
- Attracts birds
- Perennial, grows 1-3.5 feet tall

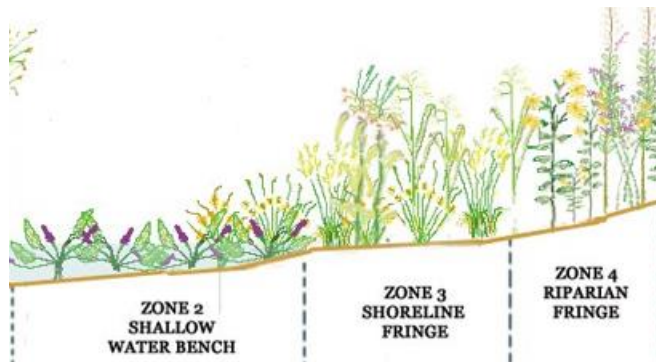


Photo by Vermont Wetland Plants Supply ©, 2023



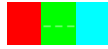
 **Soft Rush** (*Juncus effusus*)



Photo by Peggy Romfh ©, 2023



Photo by Sally and Andy Wasowski ©, 2023

Benefits:

- Native Species, hardiness compatible
- Nutrient sequestration, prevents soil erosion
- Attracts birds
- Perennial, grows 1-4 feet tall

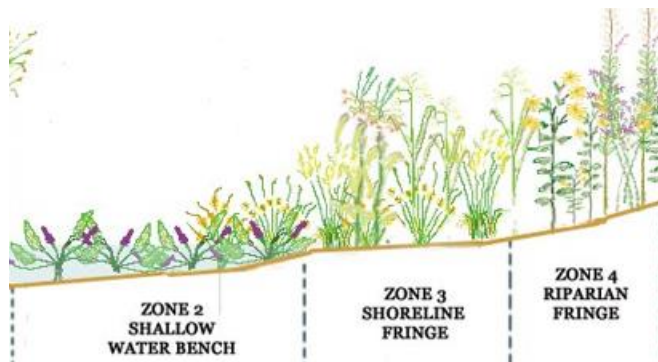
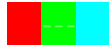


Photo by Vermont Wetland Plants Supply ©, 2023



 **Woolgrass** (*Scirpus cyperinus*)

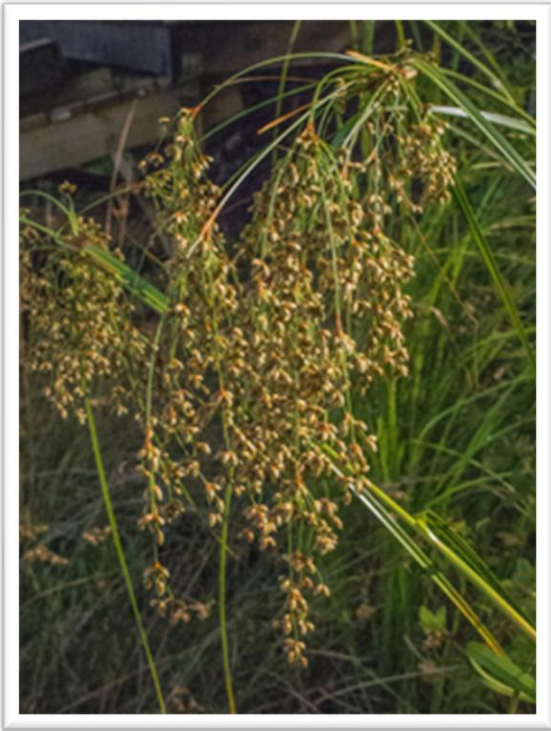


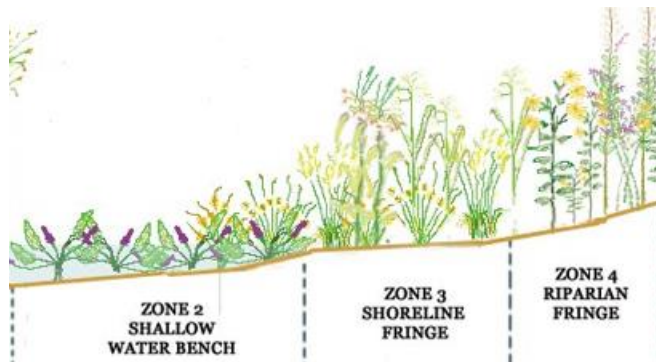
Photo by Stephanie Brundage ©, 2023



Photo by Stephanie Brundage ©, 2023

Benefits:

- Native Species, hardiness compatible
- Nutrient sequestration, erosion control
- Stems provide cover for nesting birds
- Flowers form 6-12 in. clusters
- Perennial, grows 3-6 feet tall



(END REPORT)

Photo by Vermont Wetland Plants Supply ©, 2023

