

# Showcasing “Workhorse Species”

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## And They’re Off... Workhorse Species Gallop Toward Successful Shoreland Restorations

Naturalist skills can come in handy when you’re thinking about shoreland restoration. If you observe an intact, natural shoreline, you begin to see which plants stand out as protectors of the soil and suppliers of food and habitat for wildlife. For example, you might notice alder (*Alnus incana*) and sweet gale (*Myrica gale*) along a lake shoreline, bouncing up and down like a shock absorber, softening the wave action and the energy coming into it. Or perhaps you watch water during a rainstorm flow around thickets and clumps of grasses and sedges, where it is intercepted by thousands of leaf blades, and the water’s power becomes minimized and braided, and it has a chance to infiltrate.

People around the country doing shoreland restorations over the last 10-15 years put these naturalist’s abilities to work by realizing that a core group of plant species can help make for successful plantings. Often practitioners call them the “workhorse species.” We have come to realize that this group of plants has characteristics that make them desirable for reestablishing shoreland buffer form, function, and beauty. Workhorse species should be abundant across a wide range of ecological settings. These plants help protect shoreland areas from erosive forces and add to the structure at a site as trees, shrubs, and ground layer vegetation.

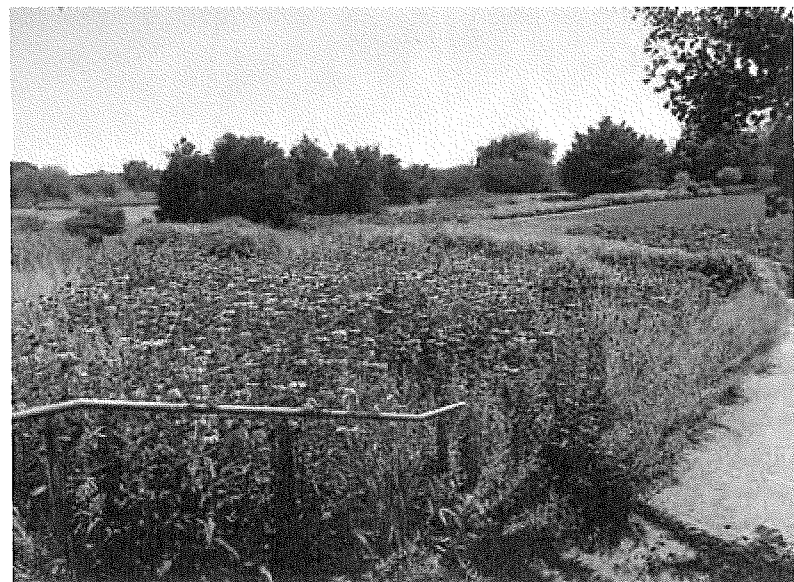
Typically, these plants have traits we admire for shoreland habitats, such as penetrating, deep roots, or they are prolific seeders that pioneer into disturbed ground before weeds and invasive species arrive. Many also have rhizomatous, fibrous, and/or clump-forming root systems, so they spread out effectively along the shore

holding soil in place to minimize erosion. Practitioners give these plant species a gold star for reestablishing our shoreland buffers because they offer other functions besides deep roots. Most have wildlife habitat benefits of one sort or another, too. They provide nesting material, food, and cover. Further, these species are more tolerant of variability in site conditions for moisture, water depth, soil type, and light. They can also be propagated efficiently and in a cost-effective manner by nurseries specializing in native plant material production.

Experiment with trying to identify a suite of plants in your region that can act as workhorse species for shoreland restorations. Choose plants that hold the soil well, spread effectively through rhizomes or seed, and have ways of supporting and assisting wildlife in their survival. Consider species that tolerate a variety of site conditions and are relatively resistant to overgrazing from muskrats,



Butternut Lake, Forest County, Wisconsin, USA, natural shoreline.



Drift example.



*Helianthus autumnale.*



*Native alder and other shrub shock absorbers.*

waterfowl, or other critters. By having this building block as part of any project, you will improve the chances of your shoreland reestablishment work being successful now and well into the future.

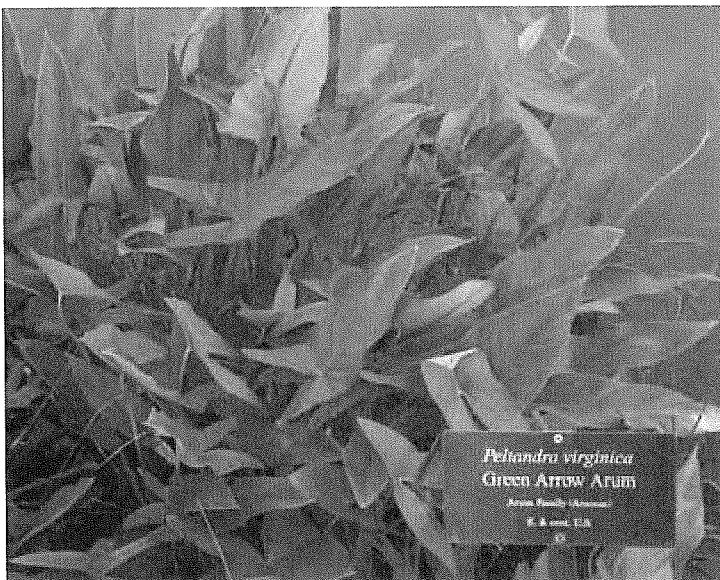
Think about using your workhorse species in larger patches. Using irregular shaped drifts of these plants running parallel to the shore will improve the aesthetics of your project. A good plan should include workhorse species laid out in these types of shoreline planting beds. Landowners can conceptually recognize more easily this kind of design versus an ecologically driven method of laying out the plant material in some type of matrix.

This patch technique makes it easier for lakeshore property owners to accept the idea of enhancement work. Visually and aesthetically, people can identify more with the workhorse species used in this manner.

You can always add showy and more niche-type plant species elsewhere in the planting through small accent areas. Overall, try to pick a diversity of plants to minimize impacts from pests, disease, or prolonged periods of high water or drought. Choose a rich color palette, bloom time assortment, and striking shape of plants that can provide the site with interesting foliage, flowers, and structure year-round.



*Silphium perfoliatum.*



*Peltandra virginica.*



*Pontederia cordata.*

Table 1. A List from the Author of Potential Great Lake States Workhorse Species to Consider for Shoreland Restorations\*.

Native plant type	Common name	Scientific name	Traits	Height	Flower color
<b>WET FEET / AQUATIC SPECIES</b>					
<b>Shrubs &amp; small trees</b>	Elderberry	<i>Sambucus canadensis</i>	Plants are browsed and fruit eaten by assorted critters	5'-8'	White
	Highbush-cranberry	<i>Viburnum opulus</i>	Easy to grow; adaptable to a variety of soil and acidity	3'-15'	White
	Labrador-tea	<i>Ledum groenlandicum</i>	Northern lakes in transitional areas	1.5'-3'	White
	Leather-leaf	<i>Chamaedaphne calyculata</i>	Northern lakes in transitional areas	1'-3'	White
	Meadowsweet	<i>Spiraea alba</i> ; <i>S. tomentosa</i>	Found on sandy-peaty shores and dried lake-beds	3'-6'	White/pink
	Steeplebush	<i>Ilex mucronata</i>	Plant male and female stock	To 10'	Yellowish
	Mountain holly	<i>Cornus sericea</i>	Bright red stems year-round; tolerates some inundation	6'-12'	White
	Red-osier dogwood	<i>Salix exigua</i> ; <i>S. discolor</i>	Cover and food for many wildlife species; fast grower; colonizer	6'-20'	Yellow
	Sandbar willow;	<i>Alnus incana</i>	Cover and food for many wildlife species; tolerant	To 30'	Catkins
	Pussy willow	<i>Myrica gale</i>	Propagated by bare root; northern distribution	To 7'	Bluish
<b>Grasses, sedges &amp; rushes</b>	Blue-joint grass	<i>Calamagrostis canadensis</i>	Readily colonize disturbed areas; rhizomes form dense sod	2'-4'	Tan
	Bulrushes	<i>Scirpus atrovirens</i> ; <i>S. cyperinus</i> ; <i>S. fluviatilis</i> ; <i>Schoenoplectus acutus</i> ; <i>S. validus</i>			
	Great bur-reed	<i>Sparganium eurycarpum</i>	Soil stabilizers; wildlife food; nesting material	3'-5'	Brown
	Needle spike-rush	<i>Eleocharis acicularis</i>	Creeping rootstock	1'-3.5'	Green
	Rattlesnake grass	<i>Glyceria canadensis</i>	Fine spreading rhizomes; often volunteers	2'-6"	Greenish
	Sedges	<i>Carex aquatilis</i> ; <i>C. comosa</i> ; <i>C. crinita</i> ; <i>C. lacustris</i> ; <i>C. limosa</i>	Semi-aquatic grass; spreads by rhizomes; significant to wildlife	2'-3'	Green
	Prairie-cord grass	<i>Spartina pectinata</i>	Plants often colonial, form clumps, and/or with fibrous roots or rhizomes long-creeping	1'-5'	Yellow to brown
	Virginia wild rye	<i>Elymus virginicus</i>	A good performer; withstands tough situations	4'-7'	Tan
			Moderate moisture to moist; in sandy, loamy soil	4'-5'	Tan
	<b>Wildflowers</b>	Arrow-aram; Tuckahoe	<i>Peltandra virginica</i>	Emerges annually from bulbs with thick fibrous roots	To 2'
Blue-flag iris;		<i>Iris virginica</i> ; <i>I. versicolor</i>	Easily established and increased by nurseries	2'-3'	Blue
north, blue-flag		<i>Verbena hastata</i>	Prolific seeder; easy to establish	2'-3'	Blue
Blue vervain		<i>Eupatorium perfoliatum</i>	Species of shorelines and recently exposed wet soil	2'-4'	White
Boneset		<i>Juncus effusus</i>	Forms dense clumps; good performer in moist soils	1'-2'	Brown
Common rush		<i>Zizia aurea</i>	Good performer with year-round interest; mesic to moist soil	1'-3'	Yellow
Golden Alexander		<i>Hypericum pyramidalatum</i>	Prolific seed producer; striking foliage and flower; shrub-like	3'-5'	Yellow
Great St. John's wort		<i>Eupatorium maculatum</i>	Widespread in northern North America from ocean to ocean	2'-7'	Pink
Joe-pye weed		<i>Asclepias incarnata</i>	Prefers sandy, loamy soil; host plant for monarch butterfly	To 5'	Pink
Marsh milkweed		<i>Aster novae-angliae</i>	Moderate moisture to moist; in sandy, loamy soil	1'-7'	Purple
New England aster	<i>Pontederia cordata</i>	Covers sediments with a tough vegetative mat; colonizer; plant in 12+ inches of water as tuber can freeze	1'-3.5'	Violet	

	Sneezweed Swamp aster Swamp loosestrife Sweet flag	<i>Helenium autumnale</i> <i>Aster puniceus</i> <i>Decodon verticillatus</i> <i>Acorus americanus</i>	Prolific seeder; moist to wet; in sandy, loamy soil On peaty, mucky, or sandy soils; eastern US Mat forming woody perennial; eastern US; likes shallows Likes water less than 20" deep; in wet, silty soil	3'-4' 1'-7' 1'-9' To 6'	Yellow Purple Pink Green
<b>DRY FEET SPECIES</b>					
<b>Shrubs &amp; small trees</b>	Chokecherry Black chokeberry Hazelnuts  Juneberry; serviceberry	<i>Prunus virginiana</i> <i>Aronia melanocarpa</i> <i>Corylus americana</i> ; <i>C. cornuta</i>  <i>Amelanchier arborea</i> ; <i>A. laevis</i> ; <i>A. sanguinea</i>  <i>Viburnum lentago</i> <i>Prunus pensylvanica</i> <i>Symphoricarpos albus</i> <i>Comptonia peregrina</i>  <i>Prunus americana</i>	Everywhere but wet ground; grow in thickets by runners Plants are browsed and fruit eaten by assorted critters  Tolerate dry to wet soils; attractive foliage and fall color; fast growers; significant wildlife value  Eastern US; clump forming; dry to moist sites; significant wildlife value Adapts to a wide range of sites; fibrous roots, multi-stemmed Routinely available; adapted to assorted soil conditions Important browse; good for shelter; tolerates different soils Does especially well in open, sterile, sandy soils; mat-forming  Produces runners and spreads to form a hedge	10'-25' 3'-6'  6'-8' / to 16'  10'-30' / to 15' To 15' 5'-25' To 18' 1'-3'  To 15'	White White  Catkins  White Green White White Catkins  White
<b>Grasses, sedges &amp; rushes</b>	Big bluestem Fringed brome Indian grass Prairie drop seed Sedges  Switch grass	<i>Andropogon gerardii</i> <i>Bromus ciliata</i> <i>Sorghastrum nutans</i> <i>Sporobolus heterolepis</i> <i>Carex bichenellii</i> ; <i>C. stricta</i> ; <i>C. stipitata</i> ; <i>C. vulpinoidea</i>  <i>Panicum virgatum</i>	Used by assorted wildlife for food & cover; sandy, loamy soil Widely adapted species; tolerates some shade Sandy, loamy soil; excellent for wildlife habitat and food Dry to moderate moisture; sandy, loamy soil; clump former  Plants often colonial, form clumps, and/or with fibrous roots or rhizomes long-creeping; dry to moderate moisture Dry to moderate moisture; sod forming; quality habitat	5'-8' 2'-3' 5'-7' 2'-4'  1'-3' 3'-6'	Purple Green Brown Green  Yellow to green Purple
<b>Wildflowers</b>	Bergamot Big-leaved aster Cup plant Fireweed Grass-leaved goldenrod Grey goldenrod Yellow coneflower	<i>Monarda fistulosa</i> <i>Aster macrophyllus</i> <i>Silphium perfoliatum</i> <i>Epilobium angustifolium</i> <i>Euthamia graminifolia</i> <i>Solidago nemoralis</i> <i>Ratibida pinnata</i>	Prolific seeder; dry to moist soils; showy flower Spreads quickly; common ground cover in northern forests Aggressive, tall plant; birds love it; cupped leaves hold water Forms clumps and stands, hummingbirds dig it Rhizomes forming patches; tidy goldenrod Good for dry sites; in rocky, sandy soil Prolific seeder; easy to establish; in sandy, loamy, limy soil	3'-4' 0.5-1.5' 6'-9' 3'-4' 1'-4' 1'-2' 2'-4'	Pink Blue Yellow Pink Yellow Yellow Yellow

\* Larger trees should be chosen according to specific site conditions and ecological region.

**Web links of interest:**

Native Plant Network <http://nativeplants.for.uidaho.edu/network/general.asp>.

USDA Natural Resources Conservation Service PLANTS database: <http://plants.usda.gov/index.html>.