

**VOLUSIA COUNTY  
HABITAT PLANTING GUIDELINES**

**1) BEACH & DUNE**

<b>Trees</b>			
<i>Sabal palmetto</i>	Cabbage palm		
<b>Shrubs</b>			
<i>Chrysobalanus icaco</i>	Green cocoplum	<i>Myrcianthes fragrans</i>	Simpson stopper
<i>Croton punctatus</i>	Beach croton	<i>Serenoa repens</i>	Saw palmetto
<i>Dodonaea viscosa</i>	Varnish leaf	<i>Sophora tomentosa</i>	Necklace pod
<i>Erythrina herbacea</i>	Coral bean	<i>Suriana maritima</i>	Bay cedar
<i>Forestiera segregata</i>	Florida privet	<i>Yucca aloifolia</i>	Spanish bayonet
<b>Groundcovers</b>			
<i>Alternanthera flavescens</i>	Yellow joyweed	<i>Licania michauxii</i>	Gopher apple
<i>Alternanthera maritima</i>	Beach chaff-flower	<i>Muhlenbergia capillaris</i>	Muhly grass
<i>Ambrosia hispida</i>	Coastal ragweed	<i>Opuntia humifusa</i>	Prickly-pear cactus
<i>Blutaparon vermiculare</i>	Samphire	<i>Opuntia stricta</i>	Prickly-pear cactus
<i>Chamaesyce spp.</i>	Dune spurge	<i>Panicum amarum</i>	Bitter panic grass
<i>Distichlis spicata</i>	Saltgrass	<i>Paspalum vaginatum</i>	Seashore paspalum
<i>Ernodia littoralis</i>	Golden creeper	<i>Salicornia spp.</i>	Glasswort
<i>Hymenocallis latifolia</i>	Spider lily	<i>Sesuvium portulacastrum</i>	Sea purslane
<i>Ipomoea imperati</i>	Beach morning glory	<i>Spartina patens</i>	Saltmeadow cordgrass
<i>Ipomoea pes-caprae</i>	Railroad vine	<i>Sporobolus virginicus</i>	Seashore dropseed
<i>Iva imbricata</i>	Beach elder	<i>Uniola paniculata</i>	Sea oats
<b>Vines</b>			
<i>Canavalia rosea</i>	Beach bean	<i>Passiflora incarnata</i>	Purple passionflower
<i>Echites umbellata</i>	Devil's potato	<i>Passiflora suberosa</i>	Corkystem passionflower
<i>Ipomoea spp.</i>	Morning glory	<i>Pentalinon luteum</i>	Wild allamanda
<b>Wildflowers</b>			
<i>Borrichia spp.</i>	Sea oxeye daisy	<i>Helianthus debilis</i>	Dune sunflower
<i>Chamaecrista spp.</i>	Partridge pea	<i>Ipomopsis rubra</i>	Standing cypress
<i>Eustoma exaltatum</i>	Seaside gentian	<i>Monarda punctata</i>	Dotted horsemint
<i>Gaillardia pulchella</i>	Blanket flower	<i>Oenothera humifusa</i>	Seaside evening primrose
<i>Glandularia maritima</i>	Beach verbena	<i>Salvia coccinea</i>	Tropical sage

**1) Beach & Dune**  
Planting Worksheet

<b>Table 1</b>	% of Total Area	
	Minimum	Maximum
Shrubs	10	20
Groundcovers	40	60
Vines	10	20
Wildflowers	20	40

	Total Area to be Planted (sq. ft.)		% from Table 1 Must equal or exceed 100%		Area to be Planted (sq. ft.)		Spacing Requirements (sq. ft.)		Total Number of Plants Required
Shrubs		X		=		÷	30	=	
Groundcovers		X		=		÷	10	=	
Vines		X		=		÷	10	=	
Wildflowers		X		=		÷	10	=	

## 2) MARITIME FOREST

Trees			
<i>Celtis laevigata</i>	Sugarberry	<i>Persea borbonia</i>	Redbay
<i>Diospyros virginiana</i>	Persimmon	<i>Quercus geminata</i>	Sand live oak
<i>Forestiera segregata</i>	Florida privet	<i>Quercus myrtifolia</i>	Myrtle oak
<i>Ilex opaca</i>	American holly	<i>Quercus virginiana</i>	Live oak
<i>Juniperus silicicola</i>	Southern redcedar	<i>Sabal palmetto</i>	Cabbage palm
<i>Magnolia grandiflora</i>	Southern magnolia	<i>Zanthoxylum clava-herculis</i>	Hercules club
<i>Osmanthus americanus</i>	Devilwood	<i>Zanthoxylum fagara</i>	Wild lime
Shrubs			
<i>Ardisia escallonioides</i>	Marlberry	<i>Myrcianthes fragrans</i>	Simpson stopper
<i>Callicarpa americana</i>	Beautyberry	<i>Myrica cerifera</i>	Wax myrtle
<i>Capparis cynophallophora</i>	Jamaica caper	<i>Myrsine guianensis</i>	Myrsine
<i>Eugenia axillaris</i>	White stopper	<i>Psychotria nervosa</i>	Wild coffee
<i>Eugenia foetida</i>	Spanish stopper	<i>Serenoa repens</i>	Saw palmetto
<i>Forestiera segregata</i>	Florida privet	<i>Sideroxylon tenax</i>	Tough buckthorn
<i>Ilex vomitoria</i>	Yaupon holly	<i>Vaccinium arboreum</i>	Sparkleberry
Groundcovers			
<i>Zamia pumila</i>	Coontie		
Vines			
<i>Echites umbellata</i>	Devil's potato	<i>Parthenocissus quinquefolia</i>	Virginia creeper
<i>Ipomoea spp.</i>	Morning glory	<i>Vitis spp.</i>	Wild grape

**2) Maritime Forest**  
Planting Worksheet

<b>Table 2</b>	% of Total Area	
	Minimum	Maximum
Trees	40	60
Shrubs	40	50
Groundcovers	0	20
Vines	0	20

	Total Area to be Planted (sq. ft.)		% from Table 2 Must equal or exceed 100%		Area to be Planted (sq. ft.)		Spacing Requirements (sq. ft.)		Total Number of Plants Required
Trees		X		=		÷	100	=	
Shrubs		X		=		÷	30	=	
Groundcovers		X		=		÷	10	=	
Vines		X		=		÷	10	=	

### 3) PINE FLATWOODS

Trees			
<i>Diospyros virginiana</i>	Persimmon	<i>Pinus serotina</i>	Pond pine
<i>Gordonia lasianthus</i>	Loblolly bay	<i>Quercus geminata</i>	Sand live oak
<i>Ilex cassine</i>	Dahoon holly	<i>Quercus nigra</i>	Water oak
<i>Persea palustris</i>	Redbay	<i>Quercus virginiana</i>	Live oak
<i>Pinus elliottii</i> var. <i>densa</i>	North Florida slash pine	<i>Sabal palmetto</i>	Cabbage palm
<i>Pinus palustris</i>	Longleaf pine		
Shrubs			
<i>Asimina reticulata</i>	Pawpaw	<i>Lyonia fruticosa</i>	Staggerbush
<i>Befaria racemosa</i>	Tarflower	<i>Lyonia lucida</i>	Shiny lyonia
<i>Callicarpa americana</i>	Beautyberry	<i>Myrica cerifera</i>	Wax myrtle
<i>Hypericum galioides</i>	St. John's wort	<i>Rhus copallinum</i>	Winged sumac
<i>Hypericum hypericoides</i>	St. John's wort	<i>Serenoa repens</i>	Saw palmetto
<i>Ilex glabra</i>	Gallberry	<i>Viburnum nudum</i>	Possum haw
<i>Lyonia ferruginea</i>	Rusty lyonia		
Groundcovers			
<i>Andropogon virginicus</i>	Broomsedge	<i>Sorghastrum secundum</i>	Lopsided Indian grass
<i>Aristida</i> spp.	Wiregrass	<i>Spartina bakeri</i>	Sand cordgrass
<i>Lachnanthes caroliana</i>	Redroot	<i>Vaccinium darrowi</i>	Blueberry
<i>Licania michauxii</i>	Gopher apple	<i>Vaccinium myrsinites</i>	Shiny blueberry
<i>Muhlenbergia capillaris</i>	Muhly grass	<i>Woodwardia virginica</i>	Virginia chain fern
Vines			
<i>Gelsemium sempervirens</i>	Yellow jessamine	<i>Parthenocissus quinquefolia</i>	Virginia creeper
Wildflowers			
<i>Asclepias tuberosa</i>	Butterfly weed	<i>Lobelia</i> spp.	Lobelia
<i>Aster concolor</i>	Eastern silver aster	<i>Monarda punctata</i>	Dotted horsemint
<i>Aster walteri</i>	Walter's aster	<i>Palafoxia integrifolia</i>	Coastalplain palafox
<i>Carphephorus carnosus</i>	Star clusters	<i>Phoebanthus grandiflorus</i>	Phoebanthus
<i>Carphephorus corymbosus</i>	Florida paintbrush	<i>Piloblephis rigida</i>	Florida pennyroyal
<i>Carphephorus odoratissimus</i>	Vanilla plant	<i>Piriqueta caroliniana</i>	Pitted stripeseed
<i>Chrysopsis scabrella</i>	Golden asters	<i>Pityopsis graminifolia</i>	Golden aster
<i>Dichromena</i> spp.	White-top sedge	<i>Rhexia</i> spp.	Meadow beauty
<i>Dyschoriste</i> spp.	Twinflower	<i>Rudbeckia hirta</i>	Black-eyed Susan
<i>Elephantopus</i> spp.	Elephant's foot	<i>Salvia azurea</i>	Azure blue sage
<i>Flaveria</i> spp.	Yellowtop	<i>Salvia lyrata</i>	Lyre-leaved sage
<i>Helianthus angustifolius</i>	Narrow-leaf sunflower	<i>Sisyrinchium atlanticum</i>	Blue-eyed grass
<i>Helianthus radula</i>	Rayless sunflower	<i>Solidago</i> spp.	Goldenrod
<i>Justicia angusta</i>	Pineland waterwillow	<i>Vernonia angustifolia</i>	Ironweed
<i>Liatis</i> spp.	Blazing star	<i>Xyris</i> spp.	Yellow-eyed grass
<i>Lilium catesbaei</i>	Pine lily	<i>Zephyranthes atamasco</i>	Rain lily

**3) Pine Flatwoods**  
Planting Worksheet

<b>Table 3</b>	% of Total Area	
	Minimum	Maximum
Trees	10	40
Shrubs	20	40
Groundcovers	30	50
Vines	0	10
Wildflowers	40	60

	Total Area to be Planted (sq. ft.)		% from Table 3 Must equal or exceed 100%		Area to be Planted (sq. ft.)		Spacing Requirements (sq. ft.)		Total Number of Plants Required
Trees		X	=		÷	100	=		
Shrubs		X	=		÷	30	=		
Groundcovers		X	=		÷	10	=		
Vines		X	=		÷	10	=		
Wildflowers		X	=		÷	10	=		

#### 4) SCRUB

Trees			
<i>Carya floridana</i>	Scrub hickory	<i>Persea humilis</i>	Silkbay
<i>Ilex arenicola</i>	Scrub holly	<i>Pinus clausa</i>	Sand pine
<i>Lyonia ferruginea</i>	Rusty Lyonia	<i>Quercus chapmanii</i>	Chapman's oak
<i>Lyonia fruticosa</i>	Staggerbush	<i>Quercus geminata</i>	Sand live oak
<i>Osmanthus megacarpus</i>	Scrub devilwood	<i>Quercus myrtifolia</i>	Myrtle oak
Shrubs			
<i>Asimina obovata</i>	Flag pawpaw	<i>Sabal etonia</i>	Scrub palmetto
<i>Asimina pygmaea</i>	Dwarf pawpaw	<i>Serenoa repens</i>	Saw palmetto
<i>Befaria recemosa</i>	Tarflower	<i>Sideroxylon tenax</i>	Tough buckthorn
<i>Garberia heterophylla</i>	Garberia	<i>Vaccinium darrowi</i>	Blueberry
<i>Opuntia spp.</i>	Prickly-pear cactus	<i>Vaccinium myrsinites</i>	Shiny blueberry
<i>Palafoxia feayi</i>	Palafoxia	<i>Ximenia americana</i>	Hog plum
Groundcovers			
<i>Calamintha spp.</i>	Calamintha	<i>Piloblephis rigida</i>	Florida pennyroyal
<i>Conradina spp.</i>	Scrub mint	<i>Sideroxylon rufohirtum</i>	Dwarf buckthorn
<i>Hypericum reductum</i>	Scrub wort	<i>Yucca filamentosa</i>	Adam's needle
<i>Licania michauxii</i>	Gopher apple	<i>Zamia pumila</i>	Coontie
<i>Nolina brittoniana</i>	Britton's beargrass		
Vines			
<i>Bonamia grandiflora</i>	Florida bonamia	<i>Galactia spp.</i>	Milk pea
<i>Centrosema spp.</i>	Butterfly pea		
Wildflowers			
<i>Asclepias tuberosa</i>	Butterfly weed	<i>Liatris spp.</i>	Blazing star
<i>Balduina angustifolia</i>	Yellow buttons	<i>Pityopsis graminifolia</i>	Golden aster
<i>Chrysopsis floridana</i>	Florida aster	<i>Polygonella spp.</i>	Wireweed
<i>Heterotheca subaxillaris</i>	Camphor weed	<i>Sisyrinchium xerophyllum</i>	Jeweled blue-eyed grass

**4) Scrub**  
Planting Worksheet

<b>Table 4</b>	% of Total Area	
	Minimum	Maximum
Trees	20	50
Shrubs	40	60
Groundcovers	20	40
Vines	0	10
Wildflowers	10	20

	Total Area to be Planted (sq. ft.)		% from Table 4 Must equal or exceed 100%		Area to be Planted (sq. ft.)		Spacing Requirements (sq. ft.)		Total Number of Plants Required
Trees		X	=		÷	100	=		
Shrubs		X	=		÷	30	=		
Groundcovers		X	=		÷	10	=		
Vines		X	=		÷	10	=		
Wildflowers		X	=		÷	10	=		

**5) SANDHILL**

<b>Trees</b>			
<i>Crataegus flava</i>	Summer haw	<i>Pinus palustris</i>	Longleaf pine
<i>Diospyros virginiana</i>	Persimmon	<i>Quercus geminata</i>	Sand live oak
<i>Pinus elliottii</i>	Slash pine	<i>Quercus laevis</i>	Turkey oak
<b>Shrubs</b>			
<i>Asimina obovata</i>	Flag pawpaw	<i>Prunus angustifolia</i>	Chickasaw plum
<i>Callicarpa americana</i>	Beautyberry	<i>Prunus geniculata</i>	Scrub plum
<i>Garberia heterophylla</i>	Garberia	<i>Serenoa repens</i>	Saw palmetto
<i>Lyonia ferruginea</i>	Rusty lyonia		
<b>Groundcover</b>			
<i>Aristida beyrichiana</i>	Wiregrass	<i>Sorghastrum secundum</i>	Lopsided Indian grass
<i>Licania michauxii</i>	Gopher apple	<i>Sporobolus junceus</i>	Pineland dropseed
<i>Nolina brittoniana</i>	Britton's beargrass	<i>Yucca filamentosa</i>	Adam's needle
<b>Vines</b>			
<i>Gelsemium sempervirens</i>	Yellow jessamine	<i>Passiflora incarnata</i>	Purple passionflower
<i>Lonicera sempervirens</i>	Coral honeysuckle		
<b>Wildflowers</b>			
<i>Asclepias tuberosa</i>	Butterfly weed	<i>Phoebanthus grandiflorus</i>	Phoebanthus
<i>Carphephorus corymbosus</i>	Florida paintbrush	<i>Piriqueta caroliniana</i>	Pitted stripeseed
<i>Chrysopsis scabrella</i>	Golden aster	<i>Pityopsis graminifolia</i>	Golden aster
<i>Commelina erecta</i>	Dayflower	<i>Polygonella fimbriata</i>	Sandhill wireweed
<i>Dyschoriste spp.</i>	Twinflower	<i>Ruellia caroliniensis</i>	Wild petunia
<i>Elephantopus spp.</i>	Elephant's foot	<i>Sisyrinchium xerophyllum</i>	Jeweled blue-eyed grass
<i>Liatris spp.</i>	Blazing star	<i>Solidago chapmanii</i>	Chapman's goldenrod
<i>Penstemon australis</i>	Pink beardtongue	<i>Vernonia angustifolia</i>	Ironweed
<i>Penstemon multiflorus</i>	White beardtongue		

**5) Sandhill**  
Planting Worksheet

<b>Table 5</b>	% of Total Area	
	Minimum	Maximum
Trees	40	50
Shrubs	20	40
Groundcovers	10	30
Vines	0	20
Wildflowers	20	30

	Total Area to be Planted (sq. ft.)		% from Table 5 Must equal or exceed 100%		Area to be Planted (sq. ft.)		Spacing Requirements (sq. ft.)		Total Number of Plants Required
Trees		X		=		÷	100	=	
Shrubs		X		=		÷	30	=	
Groundcovers		X		=		÷	10	=	
Vines		X		=		÷	10	=	
Wildflowers		X		=		÷	10	=	

### 6) CYPRESS SWAMP

Trees			
<i>Acer rubrum</i>	Red maple	<i>Nyssa sylvatica var. biflora</i>	Swamp tupelo
<i>Fraxinus caroliniana</i>	Pop ash	<i>Persea palustris</i>	Redbay
<i>Gleditsia aquatica</i>	Water-locust	<i>Taxodium ascendens</i>	Pond cypress
<i>Ilex cassine</i>	Dahoon holly	<i>Taxodium distichum</i>	Bald cypress
Shrubs			
<i>Cephalanthus occidentalis</i>	Buttonbush	<i>Itea virginica</i>	Virginia willow
Groundcovers			
<i>Blechnum serrulatum</i>	Swamp fern	<i>Peltandra spp.</i>	Spoonflower
<i>Ludwigia repens</i>	Water primrose	<i>Polygonum hydropiperoides</i>	Smartweed
<i>Orontium aquaticum</i>	Golden club	<i>Saururus cernuus</i>	Lizard's tail
<i>Osmunda regalis</i>	Royal fern	<i>Thelypteris spp.</i>	Shield fern
Vines			
<i>Ampelopsis arborea</i>	Peppervine	<i>Rosa palustris</i>	Swamp rose
<i>Aster carolinianus</i>	Climbing aster		
Wildflowers			
<i>Crinum americanum</i>	String lily	<i>Hymenocallis spp.</i>	Spider lily
<i>Hydrolea corymbosa</i>	Skyflower		

**6) Cypress Swamps**  
Planting Worksheet

<b>Table 6</b>	% of Total Area	
	Minimum	Maximum
Trees	60	100
Shrubs	0	30
Groundcovers	30	60
Vines	0	20
Wildflowers	0	20

	Total Area to be Planted (sq. ft.)		% from Table 6 Must equal or exceed 100%		Area to be Planted (sq. ft.)		Spacing Requirements (sq. ft.)		Total Number of Plants Required
Trees		X	=		÷	100	=		
Shrubs		X	=		÷	30	=		
Groundcovers		X	=		÷	10	=		
Vines		X	=		÷	10	=		
Wildflowers		X	=		÷	10	=		

### 7) HARDWOOD SWAMP

Trees			
<i>Acer rubrum</i>	Red maple	<i>Ilex cassine</i>	Dahoon holly
<i>Carya aquatica</i>	Water hickory	<i>Nyssa sylvatica</i> var. <i>biflora</i>	Swamp tupelo
<i>Cornus foemina</i>	Swamp dogwood	<i>Persea palustris</i>	Redbay
<i>Fraxinus caroliniana</i>	Pop ash	<i>Salix caroliniana</i>	Coastal plain willow
<i>Gleditsia aquatica</i>	Water-locust	<i>Taxodium ascendens</i>	Pond cypress
<i>Magnolia virginiana</i>	Sweetbay magnolia	<i>Taxodium distichum</i>	Bald cypress
Shrubs			
<i>Cephalanthus occidentalis</i>	Buttonbush	<i>Itea virginica</i>	Virginia willow
<i>Hibiscus coccineus</i>	Scarlet hibiscus		
Groundcovers			
<i>Blechnum serrulatum</i>	Swamp fern	<i>Osmunda regalis</i>	Royal fern
<i>Canna flaccida</i>	Yellow canna	<i>Peltandra</i> spp.	Spoonflower
<i>Iris hexagona</i>	Prairie iris	<i>Polygonum hydropiperoides</i>	Smartweed
<i>Ludwigia repens</i>	Water primrose	<i>Saururus cernuus</i>	Lizard's tail
<i>Orontium aquaticum</i>	Golden club	<i>Thelypteris</i> spp.	Shield fern
Vines			
<i>Aster carolinianus</i>	Climbing aster	<i>Rosa palustris</i>	Swamp rose
<i>Ipomoea</i> spp.	Morning glory		
Wildflowers			
<i>Crinum americanum</i>	String lily	<i>Hymenocallis</i> spp.	Spider lily
<i>Hydrolea corymbosa</i>	Skyflower		

### 7) Hardwood Swamps Planting Worksheet

<b>Table 7</b>	% of Total Area	
	Minimum	Maximum
Trees	60	100
Shrubs	0	30
Groundcovers	30	60
Vines	0	20
Wildflowers	0	20

	Total Area to be Planted  (sq. ft.)		% from Table 7  Must equal or exceed 100%		Area to be Planted  (sq. ft.)		Spacing Requirements  (sq. ft.)		Total Number of Plants Required
Trees		X	=		÷	100	=		
Shrubs		X	=		÷	30	=		
Groundcovers		X	=		÷	10	=		
Vines		X	=		÷	10	=		
Wildflowers		X	=		÷	10	=		

### 8) HYDRIC HAMMOCKS

Trees			
<i>Acer negundo</i>	Boxelder	<i>Liquidambar styraciflua</i>	Sweet gum
<i>Acer rubrum</i>	Red maple	<i>Liriodendron tulipifera</i>	Tulip tree
<i>Aesculus pavia</i>	Red buckeye	<i>Magnolia grandiflora</i>	Southern magnolia
<i>Agarista populifolia</i>	Pipestem	<i>Magnolia virginiana</i>	Sweetbay magnolia
<i>Carpinus caroliniana</i>	Hornbeam	<i>Morus rubra</i>	Red mulberry
<i>Carya aquatica</i>	Water hickory	<i>Persea palustris</i>	Redbay
<i>Carya glabra</i>	Pignut hickory	<i>Pinus taeda</i>	Loblolly pine
<i>Celtis laevigata</i>	Sugarberry	<i>Quercus laurifolia</i>	Laurel oak
<i>Chamaecyparis thyoides</i>	Atlantic white cedar	<i>Quercus michauxii</i>	Chestnut oak
<i>Chionanthus virginicus</i>	Fringe tree	<i>Quercus nigra</i>	Water oak
<i>Cornus foemina</i>	Swamp dogwood	<i>Sabal palmetto</i>	Cabbage palm
<i>Crataegus marshallii</i>	Parsley haw	<i>Styrax americanus</i>	Snowbell
<i>Fraxinus pennsylvanica</i>	Green ash	<i>Tilia caroliniana</i>	Basswood
<i>Gordonia lasianthus</i>	Loblolly bay	<i>Ulmus alata</i>	Winged elm
<i>Ilex cassine</i>	Dahoon holly	<i>Ulmus americana</i>	Florida elm
Shrubs			
<i>Amorpha fruticosa</i>	Wild indigo	<i>Myrica cerifera</i>	Wax myrtle
<i>Aronia arbutifolia</i>	Red chokeberry	<i>Rhapidophyllum hystrix</i>	Needle palm
<i>Cephalanthus occidentalis</i>	Buttonbush	<i>Sabal minor</i>	Bluestem palmetto
<i>Euonymus americanus</i>	Hearts-a-burstin'	<i>Salix floridana</i>	Florida willow
<i>Illicium parviflorum</i>	Yellow anise	<i>Sideroxylon reclinatum</i>	Florida bully
<i>Leucothoe axillaris</i>	Dog-hobble	<i>Tripsacum dactyloides</i>	Gamagrass
<i>Lyonia ligustrina</i>	Maleberry	<i>Vaccinium corymbosum</i>	Highbush blueberry
<i>Lyonia lucida</i>	Shiny lyonia	<i>Viburnum dentatum</i>	Arrowwood viburnum
<i>Myrcianthes fragrans</i>	Simpson stopper	<i>Viburnum obovatum</i>	Walter's viburnum
Groundcovers			
<i>Blechnum serrulatum</i>	Swamp fern	<i>Osmunda regalis</i>	Royal fern
<i>Dryopteris ludoviciana</i>	Southern shield fern	<i>Thelypteris spp.</i>	Shield fern
<i>Osmunda cinnamomea</i>	Cinnamon fern	<i>Woodwardia areolata</i>	Netted chain fern
Vines			
<i>Ampelopsis arborea</i>	Peppervine	<i>Campsis radicans</i>	Trumpet creeper
<i>Aster carolinianus</i>	Climbing aster	<i>Decumaria barbara</i>	Climbing hydrangea
<i>Berchemia scandens</i>	Alabama supplejack	<i>Pieris phillyreifolia</i>	Pieris
<i>Bignonia capreolata</i>	Cross vine		
Wildflowers			
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	<i>Lobelia cardinalis</i>	Cardinal flower
<i>Conoclinium coelestinum</i>	Blue mist flower	<i>Vernonia gigantea</i>	Giant ironweed
<i>Crinum americanum</i>	String lily	<i>Viola affinis</i>	Florida violet

**8) Hydric Hammocks**  
Planting Worksheet

<b>Table 8</b>	% of Total Area	
	Minimum	Maximum
Trees	50	100
Shrubs	20	40
Groundcovers	10	30
Vines	0	20
Wildflowers	10	30

	Total Area to be Planted (sq. ft.)		% from Table 8 Must equal or exceed 100%		Area to be Planted (sq. ft.)		Spacing Requirements (sq. ft.)		Total Number of Plants Required
Trees		X	=		÷	100	=		
Shrubs		X	=		÷	30	=		
Groundcovers		X	=		÷	10	=		
Vines		X	=		÷	10	=		
Wildflowers		X	=		÷	10	=		

**9) MANGROVE SWAMP**

<b>Trees</b>			
<i>Avicennia germinans</i> <i>Conocarpus erectus</i>	Black mangrove Buttonwood	<i>Laguncularia racemosa</i> <i>Rhizophora mangle</i>	White mangrove Red mangrove
<b>Shrubs</b>			
<i>Acrostichum danaeifolium</i> <i>Baccharis halimifolia</i>	Leather fern Saltbush	<i>Lycium carolinianum</i>	Christmas berry
<b>Groundcovers</b>			
<i>Batis maritima</i> <i>Borrchia frutescens</i>	Saltwort Sea oxeye daisy	<i>Limonium carolinianum</i> <i>Salicornia spp.</i>	Sea-lavender Glasswort

**9) Mangrove Swamps**  
Planting Worksheet

<b>Table 9</b>	% of Total Area	
	Minimum	Maximum
Trees	30	50
Shrubs	30	40
Groundcovers	30	50

	Total Area to be Planted (sq. ft.)		% from Table 9 Must equal or exceed 100%		Area to be Planted (sq. ft.)		Spacing Requirements (sq. ft.)		Total Number of Plants Required
Trees		X		=		÷	100	=	
Shrubs		X		=		÷	30	=	
Groundcovers		X		=		÷	10	=	

### 10) SALTWATER MARSHES

<b>Shrubs</b>			
<i>Acrostichum danaeifolium</i>	Leather fern	<i>Iva frutescens</i>	Marsh elder
<i>Baccharis halimifolia</i>	Saltbush	<i>Lycium carolinianum</i>	Christmas berry
<b>Groundcovers</b>			
<i>Bacopa monnieri</i>	Water hyssop	<i>Monanthochloe littoralis</i>	Key grass
<i>Batis maritima</i>	Saltwort	<i>Paspalum vaginatum</i>	Knotgrass
<i>Cladium jamaicense</i>	Sawgrass	<i>Salicornia spp.</i>	Glasswort
<i>Cyperus odoratus</i>	Flat sedge	<i>Scirpus validus</i>	Soft-stem bulrush
<i>Distichlis spicata</i>	Saltgrass	<i>Sesuvium portulacastrum</i>	Sea purslane
<i>Eragrostis elliotii</i>	Elliott lovegrass	<i>Spartina alterniflora</i>	Smooth cordgrass
<i>Fuirena scirpoidea</i>	Rush fuirena	<i>Spartina bakeri</i>	Sand cordgrass
<i>Juncus roemerianus</i>	Black rush	<i>Spartina patens</i>	Saltmeadow cordgrass
<i>Limonium carolinianum</i>	Sea-lavender	<i>Sporobolus virginicus</i>	Seashore dropseed
<b>Wildflowers</b>			
<i>Aster tenuifolius</i>	Saltmarsh aster	<i>Solidago sempervirens</i>	Seaside goldenrod

**10) Saltwater Marshes**  
Planting Worksheet

<b>Table 10</b>	% of Total Area	
	Minimum	Maximum
Shrubs	20	40
Groundcovers	70	80
Wildflowers	0	10

	Total Area to be Planted (sq. ft.)		% from Table 10 Must equal or exceed 100%		Area to be Planted (sq. ft.)		Spacing Requirements (sq. ft.)		Total Number of Plants Required
Shrubs		X		=		÷	30	=	
Groundcovers		X		=		÷	10	=	
Wildflowers		X		=		÷	10	=	

### 11) MESIC HARDWOOD FOREST

<b>Trees</b>			
<i>Aesculus pavia</i>	Red buckeye	<i>Magnolia grandiflora</i>	Southern magnolia
<i>Aralia spinosa</i>	Devil's walking stick	<i>Morus rubra</i>	Red mulberry
<i>Carpinus caroliniana</i>	Hornbeam	<i>Ostrya virginiana</i>	Hophornbeam
<i>Carya glabra</i>	Pignut hickory	<i>Persea borbonia</i>	Redbay
<i>Celtis laevigata</i>	Sugarberry	<i>Prunus caroliniana</i>	Cherry laurel
<i>Cercis canadensis</i>	Redbud	<i>Prunus umbellata</i>	Flatwoods plum
<i>Chionanthus virginicus</i>	Fringe tree	<i>Quercus laurifolia</i>	Laurel oak
<i>Cornus florida</i>	Dogwood	<i>Quercus nigra</i>	Water oak
<i>Diospyros virginiana</i>	Persimmon	<i>Quercus virginiana</i>	Live oak
<i>Fraxinus americana</i>	White ash	<i>Sabal palmetto</i>	Cabbage palm
<i>Ilex opaca</i>	American holly	<i>Sapindus saponaria</i>	Soapberry
<i>Juniperus silicicola</i>	Southern redcedar	<i>Tilia caroliniana</i>	Basswood
<i>Liquidambar styraciflua</i>	Sweet gum	<i>Ulmus alata</i>	Winged elm
<b>Shrubs</b>			
<i>Callicarpa americana</i>	Beautyberry	<i>Ilex vomitoria</i>	Yaupon holly
<i>Erythrina herbacea</i>	Coralbean	<i>Rhapidophyllum hystrix</i>	Needle palm
<i>Forestiera ligustrina</i>	Upland swampprivet	<i>Rhododendron canescens</i>	Wild azalea
<i>Hamamelis virginiana</i>	Witch hazel	<i>Sabal minor</i>	Bluestem palmetto
<b>Groundcovers</b>			
<i>Dichanthelium spp.</i>	none	<i>Thelypteris spp.</i>	Shield fern
<i>Mitchella repens</i>	Partridge berry	<i>Zamia pumila</i>	Coontie
<i>Oplismenus setarius</i>	Basketgrass		
<b>Vines</b>			
<i>Bignonia capreolata</i>	Cross vine	<i>Lonicera sempervirens</i>	Coral honeysuckle
<i>Gelsemium sempervirens</i>	Yellow jessamine	<i>Parthenocissus quinquefolia</i>	Virginia creeper
<b>Wildflowers</b>			
<i>Justicia cooleyi</i>	none	<i>Salvia lyrata</i>	Lyre-leaved sage
<i>Phlox floridana</i>	Florida phlox	<i>Vernonia gigantea</i>	Giant ironweed
<i>Ruellia caroliniensis</i>	Wild petunia	<i>Viola affinis</i>	Florida violet

**11) Mesic Hardwood Hammocks**  
Planting Worksheet

<b>Table 11</b>	% of Total Area	
	Minimum	Maximum
Trees	50	100
Shrubs	20	40
Groundcovers	10	30
Vines	0	20
Wildflowers	10	30

	Total Area to be Planted (sq. ft.)		% from Table 11 Must equal or exceed 100%		Area to be Planted (sq. ft.)		Spacing Requirements (sq. ft.)		Total Number of Plants Required
Trees		X	=		÷	100	=		
Shrubs		X	=		÷	30	=		
Groundcovers		X	=		÷	10	=		
Vines		X	=		÷	10	=		
Wildflowers		X	=		÷	10	=		

### 12) CABBAGE PALM HAMMOCK

Trees			
<i>Sabal palmetto</i>	Cabbage palm	<i>Quercus virginiana</i>	Live oak
Shrubs			
<i>Callicarpa americana</i>	Beautyberry		

**12) Cabbage Palm Hammock**  
Planting Worksheet

<b>Table 12</b>	% of Total Area	
	Minimum	Maximum
Trees	70	80
Shrubs	20	30

	Total Area to be Planted (sq. ft.)		% from Table 12 Must equal or exceed 100%		Area to be Planted (sq. ft.)		Spacing Requirements (sq. ft.)		Total Number of Plants Required
Trees		X		=		÷	100	=	
Shrubs		X		=		÷	30	=	

### 13) FRESHWATER MARSH

Trees			
<i>Acer rubrum</i>	Red maple	<i>Salix caroliniana</i>	Coastal plain willow
<i>Liquidambar styraciflua</i>	Sweet gum	<i>Taxodium distichum</i>	Bald cypress
<i>Nyssa aquatica</i>	Water tupelo	<i>Taxodium ascendens</i>	Pond cypress
Shrubs			
<i>Baccharis halimifolia</i>	Saltbush	<i>Hibiscus grandiflorus</i>	Swamp hibiscus
<i>Cephalanthus occidentalis</i>	Buttonbush	<i>Sambucus canadensis</i>	Elderberry
<i>Hibiscus coccineus</i>	Scarlet hibiscus		
Groundcovers			
<i>Bacopa spp.</i>	Water hyssop	<i>Panicum hemitomon</i>	Maidencane
<i>Canna flaccida</i>	Yellow canna	<i>Peltandra spp.</i>	Spoonflower
<i>Cladium jamaicense</i>	Sawgrass	<i>Polygonum hydropiperoides</i>	Smartweed
<i>Eleocharis spp.</i>	Spikerush	<i>Pontederia cordata</i>	Pickereel weed
<i>Equisetum hyemale</i>	Horsetail	<i>Sagittaria spp.</i>	Arrowhead
<i>Juncus spp.</i>	Rush	<i>Scirpus spp.</i>	Bulrush
<i>Lachnanthes caroliana</i>	Redroot	<i>Spartina bakeri</i>	Sand cordgrass
<i>Ludwigia repens</i>	Water primrose	<i>Thalia geniculata</i>	Alligator flag
<i>Osmunda cinnamomea</i>	Cinnamon fern	<i>Zizania aquatica</i>	Wild rice
<i>Osmunda regalis</i>	Royal fern		
Vines			
<i>Ipomoea spp.</i>	Morning glory		
Wildflowers			
<i>Bidens mitis</i>	Marsh beggar-ticks	<i>Hymenocallis palmeri</i>	Alligator lily
<i>Canna flaccida</i>	Yellow canna	<i>Iris hexagona</i>	Prairie iris
<i>Crinum americanum</i>	String lily	<i>Pluchea rosea</i>	Rosy camphorweed
<i>Hydrolea corymbosa</i>	Skyflower	<i>Xyris spp.</i>	Yellow-eyed grass
Aquatics			
<i>Nelumbo lutea</i>	American lotus	<i>Nymphaea odorata</i>	White water lily
<i>Nuphar luteum</i>	Spatterdock	<i>Nymphoides aquatica</i>	Floating hearts
<i>Nymphaea mexicana</i>	Yellow water lily	<i>Vallisneria americana</i>	Tapegrass

**13) Freshwater Marsh**  
Planting Worksheet

<b>Table 13</b>	% of Total Area	
	Minimum	Maximum
Trees	10	40
Shrubs	0	30
Groundcovers	50	60
Vines	0	10
Wildflowers	20	40
Aquatics	10	30

	Total Area to be Planted (sq. ft.)		% from Table 13 Must equal or exceed 100%		Area to be Planted (sq. ft.)		Spacing Requirements (sq. ft.)		Total Number of Plants Required
Trees		X	=		÷	100	=		
Shrubs		X	=		÷	30	=		
Groundcovers		X	=		÷	10	=		
Vines		X	=		÷	10	=		
Wildflowers		X	=		÷	10	=		
Aquatics		X	=		÷	10	=		

**14) COASTAL SCRUB**

<b>Trees</b>			
<i>Celtis laevigata</i>	Sugarberry	<i>Quercus geminata</i>	Sand live oak
<i>Diospyros virginiana</i>	Persimmon	<i>Quercus myrtifolia</i>	Myrtle oak
<i>Ilex opaca</i>	American holly	<i>Quercus virginiana</i>	Live oak
<i>Juniperus silicicola</i>	Southern redcedar	<i>Sabal palmetto</i>	Cabbage palm
<i>Magnolia grandiflora</i>	Southern magnolia	<i>Zanthoxylum clava-herculis</i>	Hercules club
<i>Osmanthus americanus</i>	Devilwood	<i>Zanthoxylum fagara</i>	Wild lime
<i>Persea borbonia</i>	Redbay		
<b>Shrubs</b>			
<i>Ardisia escallonioides</i>	Marlberry	<i>Ilex vomitoria</i>	Yaupon holly
<i>Baccharis halimifolia</i>	Saltbush	<i>Myrcianthes fragrans</i>	Simpson stopper
<i>Callicarpa americana</i>	Beautyberry	<i>Myrica cerifera</i>	Wax myrtle
<i>Capparis cynophallophora</i>	Jamaica caper	<i>Myrsine guianensis</i>	Myrsine
<i>Coccoloba uvifera</i>	Sea grape	<i>Psychotria nervosa</i>	Wild coffee
<i>Eugenia axillaris</i>	White stopper	<i>Serenoa repens</i>	Saw palmetto
<i>Eugenia foetida</i>	Spanish stopper	<i>Sideroxylon tenax</i>	Tough buckthorn
<i>Forestiera segregata</i>	Florida privet	<i>Vaccinium arboreum</i>	Sparkeberry
<b>Groundcovers</b>			
<i>Distichlis spicata</i>	Saltgrass	<i>Opuntia humifusa</i>	Prickly pear cactus
<i>Ipomoea pes-caprae</i>	Railroad vine	<i>Spartina bakeri</i>	Sand cordgrass
<i>Ipomoea stolonifera</i>	Beach morning glory	<i>Sporobolus virginicus</i>	Seashore dropseed
<i>Licania michauxii</i>	Gopher apple	<i>Zamia pumila</i>	Coontie
<i>Muhlenbergia capillaris</i>	Muhly grass		
<b>Vines</b>			
<i>Echites umbellata</i>	Devil's potato	<i>Parthenocissus quinquefolia</i>	Virginia creeper
<i>Ipomoea spp.</i>	Morning glory	<i>Vitis spp.</i>	Wild grape
<b>Wildflowers</b>			
<i>Borrichia spp.</i>	Sea oxeye daisy	<i>Helianthus debilis</i>	Dune sunflower
<i>Gaillardia pulchella</i>	Blanket flower	<i>Monarda punctata</i>	Dotted horsemint
<i>Glandularia maritima</i>	Beach verbena		

**14) Coastal Scrub**  
Planting Worksheet

<b>Table 14</b>	% of Total Area	
	Minimum	Maximum
Trees	10	80
Shrubs	20	70
Groundcovers	10	40
Vines	0	20
Wildflowers	0	30

	Total Area to be Planted (sq. ft.)		% from Table 14 Must equal or exceed 100%		Area to be Planted (sq. ft.)		Spacing Requirements (sq. ft.)		Total Number of Plants Required
Trees		X		=		÷	100	=	
Shrubs		X		=		÷	30	=	
Groundcovers		X		=		÷	10	=	
Vines		X		=		÷	10	=	
Wildflowers		X		=		÷	10	=	

### 15) BAY SWAMP

Trees			
<i>Acer rubrum</i>	Red maple	<i>Magnolia virginiana</i>	Sweet bay
<i>Gordonia lasianthus</i>	Loblolly bay	<i>Persea palustris</i>	Redbay
<i>Ilex cassine</i>	Dahoon holly	<i>Pinus serotina</i>	Pond pine
Shrubs			
<i>Cephalanthus occidentalis</i>	Buttonbush	<i>Itea virginica</i>	Virginia willow
Groundcovers			
<i>Blechnum serrulatum</i>	Swamp fern	<i>Peltandra spp.</i>	Spoonflower
<i>Ludwigia repens</i>	Water primrose	<i>Polygonum hydropiperoides</i>	Smartweed
<i>Orontium aquaticum</i>	Golden club	<i>Saururus cernuus</i>	Lizard's tail
<i>Osmunda regalis</i>	Royal fern	<i>Woodwardia areolata</i>	Dimorphic chain fern
Vines			
<i>Ampelopsis arborea</i>	Peppervine	<i>Rosa palustris</i>	Swamp rose
<i>Aster carolinianus</i>	Climbing aster		
Wildflowers			
<i>Crinum americanum</i>	String lily	<i>Hymenocallis spp.</i>	Spider lily
<i>Hydrolea corymbosa</i>	Skyflower		

**15) Bay Swamp**  
Planting Worksheet

<b>Table 15</b>	% of Total Area	
	Minimum	Maximum
Trees	40	60
Shrubs	20	30
Groundcovers	20	30
Vines	0	10
Wildflowers	0	10

	Total Area to be Planted (sq. ft.)		% from Table 15 Must equal or exceed 100%		Area to be Planted (sq. ft.)		Spacing Requirements (sq. ft.)		Total Number of Plants Required
Trees		X	=		÷	100	=		
Shrubs		X	=		÷	30	=		
Groundcovers		X	=		÷	10	=		
Vines		X	=		÷	10	=		
Wildflowers		X	=		÷	10	=		