

CHAPTER 62-340
DELINEATION OF THE LANDWARD EXTENT OF WETLANDS AND SURFACE WATERS

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62-340.100 Intent.

(1) This rule's intent is to provide a unified statewide methodology for the delineation of the extent of wetlands and surface waters to satisfy the mandate of Section 373.421, F.S. This delineation methodology is intended to approximate the combined landward extent of wetlands as determined by a water management district and the Department immediately before the effective date of this rule. Before implementing the specific provisions of this methodology, the regulating agency shall attempt to identify wetlands according to the definition for wetlands in subsection 373.019(25), F.S., and subsection 62-340.200(19), F.A.C., below. The landward extent of wetlands shall be determined by the dominance of plant species, soils and other hydrologic evidence indicative of regular and periodic inundation or saturation. In all cases, attempts shall be made to locate the landward extent of wetlands visually by on site inspection, or aerial photointerpretation in combination with ground truthing, without quantitative sampling. If this cannot be accomplished, the quantitative methods in paragraph 62-301.400(1)(c), F.A.C., shall be used unless the applicant or petitioner and regulating agency agree, in writing, on an alternative method for quantitatively analyzing the vegetation on site. The methodology shall not be used to delineate areas which are not wetlands as defined in subsection 62-340.200(19), F.A.C., nor to delineate as wetlands or surface waters areas exempted from delineation by statute or agency rule.

(2) The Department shall be responsible for ensuring statewide coordination and consistency in the delineation of surface waters and wetlands pursuant to this rule, by providing training and guidance to the Department, Districts, and local governments in implementing the methodology.

Specific Authority 373.421 FS. Law Implemented 373.421, 373.4211 FS. History—New 7-1-94, Formerly 17-340.100.

62-340.200 Definitions.

When used in this chapter, the following terms shall mean:

(1) "Aquatic plant" means a plant, including the roots, which typically floats on water or requires water for its entire structural support, or which will desiccate outside of water.

(2) "Canopy" means the plant stratum composed of all woody plants and palms with a trunk four inches or greater in diameter at breast height, except vines.

(3) "Diameter at Breast Height (DBH)" means the diameter of a plant's trunk or main stem at a height of 4.5 feet above the ground.

(4) "Facultative plants" means those plant species listed in subsection 62-340.450(3), F.A.C., of this chapter. For the purposes of this rule, facultative plants are not indicators of either wetland or upland conditions.

(5) "Facultative Wet plants" means those plant species listed in subsection 62-340.450(2), F.A.C., of this chapter.

(6) "Ground Cover" means the plant stratum composed of all plants not found in the canopy or subcanopy, except vines and aquatic plants.

(7) "Ground truthing" means verification on the ground of conditions on a site.

(8) "Hydric Soils" means soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part of the soil profile.

(9) "Hydric Soil Indicators" means those indicators of hydric soil conditions as identified in *Soil and Water Relationships of*

Florida's Ecological Communities (Florida Soil Conservation ed. Staff 1992).

(10) "Inundation" means a condition in which water from any source regularly and periodically covers a land surface.

(11) "Obligate plants" means those plant species listed in subsection 62-340.450(1), F.A.C., of this chapter.

(12) "Regulating agency" means the Department of Environmental Protection, the water management districts, state or regional agencies, local governments, and any other governmental entities.

(13) "Riverwash" means areas of unstabilized sandy, silty, clayey, or gravelly sediments. These areas are flooded, washed, and reworked by rivers or streams so frequently that they may support little or no vegetation.

(14) "Saturation" means a water table six inches or less from the soil surface for soils with a permeability equal to or greater than six inches per hour in all layers within the upper 12 inches, or a water table 12 inches or less from the soil surface for soils with a permeability less than six inches per hour in any layer within the upper 12 inches.

(15) "Seasonal High Water" means the elevation to which the ground and surface water can be expected to rise due to a normal wet season.

(16) "Subcanopy" means the plant stratum composed of all woody plants and palms, exclusive of the canopy, with a trunk or main stem with a DBH between one and four inches, except vines.

(17) "Upland plants" means those plant species, not listed as Obligate, Facultative Wet, or Facultative by this rule, excluding vines, aquatic plants, and any plant species not introduced into the State of Florida as of the effective date of this rule.

(18) "U.S.D.A.-S.C.S." means the United States Department of Agriculture, Soil Conservation Service.

(19) "Wetlands," as defined in subsection 373.019(25), F.S., means those areas that are inundated or saturated by surface water or ground water at a frequency and a duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils. Soils present in wetlands generally are classified as hydric or alluvial, or possess characteristics that are associated with reducing soil conditions. The prevalent vegetation in wetlands generally consists of facultative or obligate hydrophytic macrophytes that are typically adapted to areas having soil conditions described above. These species, due to morphological, physiological, or reproductive adaptations, have the ability to grow, reproduce or persist in aquatic environments or anaerobic soil conditions. Florida wetlands generally include swamps, marshes, bayheads, bogs, cypress domes and strands, sloughs, wet prairies, riverine swamps and marshes, hydric seepage slopes, tidal marshes, mangrove swamps and other similar areas. Florida wetlands generally do not include longleaf or slash pine flatwoods with an understory dominated by saw palmetto.

Specific Authority 373.421 FS. Law Implemented 373.421, 373.4211 FS. History—New 7-1-94, Formerly 17-340.200.

62-340.300 Delineation of Wetlands.

The landward extent (i.e., the boundary) of wetlands as defined in subsection 62-340.200(19), F.A.C., shall be determined by applying reasonable scientific judgment to evaluate the dominance of plant species, soils, and other hydrologic evidence of regular and periodic inundation and saturation as set forth below. In applying reasonable scientific judgment, all reliable information shall be evaluated in determining whether the area is a wetland as defined in subsection 62-340.200(19), F.A.C.

(1) Before using the wetland delineation methodology described below, the regulating agency shall attempt to identify and delineate the landward extent of wetlands by direct application of the definition of wetlands in subsection 62-340.200(19), F.A.C., with particular attention to the vegetative communities which the definition lists as wetlands and non-wetlands. If the boundary cannot be located easily by use of the definition in subsection 62-340.200(19), F.A.C., the provisions of this rule shall be used to locate the landward extent of a wetland. In applying the provisions of this rule, the regulating agency shall attempt to locate the landward extent of wetlands visually by on site inspection, or aerial photointerpretation in combination with ground truthing.

(2) The landward extent of a wetland as defined in subsection 62-340.200(19), F.A.C., shall include any of the following areas:

(a) Those areas where the areal extent of obligate plants in the appropriate vegetative stratum is greater than the areal extent of all upland plants in that stratum, as identified using the method in Rule 62-340.400, F.A.C., and either:

1. The substrate is composed of hydric soils or riverwash, as identified using standard U.S.D.A.-S.C.S. practices for Florida, including the approved hydric soil indicators, except where the hydric soil is disturbed by a nonhydrological mechanical mixing of the upper soil profile and the regulating agency establishes through data or evidence that hydric soil indicators would be present but for the disturbance;

2. The substrate is nonsoil, rock outcrop-soil complex, or the substrate is located within an artificially created wetland area; or

3. One or more of the hydrologic indicators listed in Rule 62-340.500, F.A.C., are present and reasonable scientific judgment indicates that inundation or saturation is present sufficient to meet the wetland definition of subsection 62-340.200(19), F.A.C.

(b) Those areas where the areal extent of obligate or facultative wet plants, or combinations thereof, in the appropriate stratum is equal to or greater than 80% of all the plants in that stratum, excluding facultative plants, and either:

1. The substrate is composed of hydric soils or riverwash, as identified using standard U.S.D.A.-S.C.S. practices for Florida, including the approved hydric soil indicators, except where the hydric soil is disturbed by a nonhydrologic mechanical mixing of the upper soil profile and the regulating agency establishes through data or evidence that hydric soil indicators would be present but for the disturbance;

2. The substrate is nonsoil, rock outcrop-soil complex, or the substrate is located within an artificially created wetland area; or

3. One or more of the hydrologic indicators listed in Rule 62-340.500, F.A.C., are present and reasonable scientific judgment indicates that inundation or saturation is present sufficient to meet the wetland definition of subsection 62-340.200(19), F.A.C.

(c) Those areas, other than pine flatwoods and improved pastures, with undrained hydric soils which meet, in situ, at least one of the criteria listed below. A hydric soil is considered undrained unless reasonable scientific judgment indicates permanent artificial alterations to the on site hydrology have resulted in conditions which would not support the formation of hydric soils.

1. Soils classified according to United States Department of Agriculture's *Keys to Soil Taxonomy* (4th ed. 1990) as Umbraqualfs, Sulfaquents, Hydraquents, Humaquepts, Histosols (except Folists), Argiaquolls, or Umbracqualls.

2. Saline sands (salt flats-tidal flats).

3. Soil within a hydric mapping unit designated by the U.S.D.A.-S.C.S. as frequently flooded or depressional, when the hydric nature of the soil has been field verified using the U.S.D.A.-S.C.S. approved hydric soil indicators for Florida. If a permit applicant, or a person petitioning for a formal determination pursuant to subsection 373.421(2), F.S., disputes the boundary of a frequently flooded or depressional mapping unit, the applicant or petitioner may request that the regulating agency, in cooperation with the U.S.D.A.-S.C.S., confirm the boundary. For the purposes of subsection 120.60(2), F.S., a request for a boundary confirmation pursuant to this subparagraph shall have the same effect as a timely request for additional information by the regulating agency. The regulating agency's receipt of the final response provided by the U.S.D.A.-S.C.S. to the request for boundary confirmation shall have the same effect as a receipt of timely requested additional information.

4. For the purposes of this paragraph only, "pine flatwoods" means a plant community type in Florida occurring on flat terrain with soils which may experience a seasonal high water table near the surface. The canopy species consist of a monotypic or mixed forest of long leaf pine or slash pine. The subcanopy is typically sparse or absent. The ground cover is dominated by saw palmetto with areas of wire grass, gallberry, and other shrubs, grasses, and forbs, which are not obligate or facultative wet species. Pine flatwoods do not include those wetland communities as listed in the wetland definition contained in subsection 62-340.200(19), F.A.C., which may occur in the broader landscape setting of pine flatwoods and which may contain slash pine. Also for the purposes of this paragraph only, "improved pasture" means areas where the dominant native plant community has been replaced with planted or natural recruitment of herbaceous species which are not obligate or facultative wet species and which have been actively maintained for livestock through mechanical means or grazing.

(d) Those areas where one or more of the hydrologic indicators listed in Rule 62-340.500, F.A.C., are present, and which have hydric soils, as identified using the U.S.D.A.-S.C.S. approved hydric soil indicators for Florida, and reasonable scientific judgment indicates that inundation or saturation is present sufficient to meet the wetland definition of subsection 62-340.200(19), F.A.C. These areas shall not extent beyond the seasonal high water elevation.

(3)(a) If the vegetation or soils of an upland or wetland area have been altered by natural or man-induced factors such that the boundary between wetlands and uplands cannot be delineated reliably by use of the methodology in subsection 62-340.300(2), F.A.C., as determined by the regulating agency, and the area has hydric soils or riverwash, as identified using standard U.S.D.A.-S.C.S. practices for Florida, including the approved hydric soil indicators, except where the hydric soil is disturbed by a non hydrologic mechanical mixing of the upper soil profile and the regulating agency establishes through data or evidence that hydric soil indicators would be present but for the disturbance, then the most reliable available information shall be used with reasonable scientific judgment to determine where the methodology in subsection 62-340.300(2), F.A.C., would have delineated the boundary between wetlands and uplands. Reliable available information may include, but is not limited to, aerial photographs, remaining vegetation, authoritative site-specific documents, or topographical consistencies.

(b) This subsection shall not apply to any area where regional or site-specific permitted activity, or activities which did not require a permit, under Sections 253.123 and 253.124, F.S. (1957), as subsequently amended, the provisions of Chapter 403, F.S.

(1983), relating to dredging and filling activities, Chapter 84-79, Laws of Florida, and Part IV of Chapter 373, F.S., have altered the hydrology of the area to the extent that reasonable scientific judgment, or application of the provisions of Section 62-340.550, F.A.C., indicate that under normal circumstances the area no longer inundates or saturates at a frequency and duration sufficient to meet the wetland definition in subsection 62-340.200(19), F.A.C.

(c) This subsection shall not be construed to limit the type of evidence which may be used to delineate the landward extent of a wetland under this chapter when an activity violating the regulatory requirements of Sections 253.123 and 253.124, F.S. (1957), as subsequently amended, the provisions of Chapter 403, F.S. (1983), relating to dredging and filling activities, Chapter 84-79, Laws of Florida, and Part IV of Chapter 373, F.S., has disturbed the vegetation or soils of an area.

(4) The regulating agency shall maintain sufficient soil scientists on staff to provide evaluation or consultation regarding soil determinations in applying the methodologies set forth in subsection 62-340.300(2) or (3), F.A.C. Services provided by the U.S.D.A.-S.C.S., or other competent soil scientists, under contract or agreement with the regulating agency, may be used in lieu of, or to augment, agency staff.

Specific Authority 373.421 FS. Law Implemented 373.421, 373.4211 FS. History—New 7-1-94, Formerly 17-340.300.

62-340.400 Selection of Appropriate Vegetative Stratum.

Dominance of plant species, as described in paragraphs 62-340.300(2)(a) and 62-340.300(2)(b), F.A.C., shall be determined in a plant stratum (canopy, subcanopy, or ground cover). The top stratum shall be used to determine dominance unless the top stratum, exclusive of facultative plants, constitutes less than 10 percent areal extent, or unless reasonable scientific judgment establishes that the indicator status of the top stratum is not indicative of the hydrologic conditions on site. In such cases, the stratum most indicative of on site hydrologic conditions, considering the seasonal variability in the amount and distribution of rainfall, shall be used. The evidence concerning the presence or absence of regular and periodic inundation or saturation shall be based on in situ data. All facts and factors relating to the presence or absence of regular and periodic inundation or saturation shall be weighed in deciding whether the evidence supports shifting to a lower stratum. The presence of obligate, facultative wet, or upland plants in a lower stratum does not by itself constitute sufficient evidence to shift strata, but can be considered along with other physical data in establishing the weight of evidence necessary to shift to a lower stratum. The burden of proof shall be with the party asserting that a stratum other than the top stratum should be used to determine dominance. Facultative plants shall not be considered for purposes of determining appropriate strata or dominance.

Specific Authority 373.421 FS. Law Implemented 373.421, 373.4211 FS. History—New 7-1-94, Formerly 17-340.400.

62-340.450 Vegetative Index.

(1) Obligate Species

<i>Acer</i>	maple, silver
<i>saccharinum</i>	
<i>Acoelorrhaph</i>	palm, paurotis
<i>wrightii</i>	
<i>Acrostichum</i>	leather fern
<i>spp.</i>	
<i>Aeschynomene</i>	joint-vetch,
<i>pratensis</i>	meadow
<i>Agalinis linifolia</i>	false-foxglove,
	flax-leaf
<i>Agalinis</i>	false-foxglove,
<i>maritima</i>	saltmarsh
<i>Alisma</i>	water-plantain,
<i>subcordatum</i>	subcordate
<i>Alnus serrulata</i>	alder, hazel

<i>Alternanthera philoxeroides</i>	alligator-weed
<i>Alternanthera sessilis</i>	alligator weed, sessile
<i>Amaranthus australis</i>	amaranth, southern
<i>Amaranthus cannabinus</i>	amaranth, tidemarsh
<i>Amaranthus floridanus</i>	amaranth, Florida
<i>Ammannia spp.</i>	toothcup
<i>Annona glabra</i>	pond apple
<i>Aristida affinis</i>	three-awn grass, long-leaf lakecress
<i>Armoracia aquatica</i>	
<i>Arnoglossum sulcatum</i>	indian-plantain, Georgia
<i>Asclepias incarnata</i>	milkweed, swamp
<i>Asclepias lanceolata</i>	milkweed, fen-flower
<i>Asclepias perennis</i>	milkweed, aquatic
<i>Asclepias rubra</i>	milkweed, red
<i>Aster carolinianus</i>	aster, climbing
<i>Aster elliotii</i>	aster, Elliott's
<i>Aster subulatus</i>	aster, saltmarsh
<i>Aster tenuifolius</i>	aster, saltmarsh
<i>Avicennia germinans</i>	mangrove, black
<i>Baccharis angustifolia</i>	false-willow
<i>Bacopa spp.</i>	water-hyssop
<i>Batis maritima</i>	saltwort
<i>Betula nigra</i>	birch, river
<i>Bidens spp.</i>	beggar-ticks
except	
<i>Bidens pilosa</i>	beggar-ticks, white (FAC)
<i>Bidens bipinnata</i>	Spanish needles (U)
<i>Boehmeria cylindrica</i>	false-nettle, small-spike
<i>Borrchia spp.</i>	sea oxeye
<i>Burmannia spp.</i>	burmannia
<i>Callitriche spp.</i>	water-starwort
<i>Campanula</i>	bellflower

<i>floridana</i>	
<i>Canna spp.</i>	canna
except	
<i>Canna x</i>	canna, common
<i>generalis</i>	(FAC)
<i>Cardamine</i>	bitter-cress
<i>bulbosa</i>	
<i>Cardamine</i>	spring-cress
<i>pennsylvanica</i>	
<i>Carex atlantica</i>	sedge, prickly bog
<i>Carex comosa</i>	sedge, bearded
<i>Carex crinita</i>	sedge, fringed
<i>Carex</i>	sedge,
<i>crus-corvi</i>	raven-foot
<i>Carex</i>	sedge,
<i>decomposita</i>	cypress-knee
<i>Carex elliotii</i>	sedge, Elliott's
<i>Carex folliculata</i>	sedge, long
<i>Carex gigantea</i>	sedge, large
<i>Carex howei</i>	sedge, Howe's
<i>Carex</i>	sedge, shoreline
<i>hyalinolepis</i>	
<i>Carex leptalea</i>	sedge, bristly-stalk
<i>Carex</i>	sedge, Louisiana
<i>louisianica</i>	
<i>Carex lupulina</i>	sedge, hop
<i>Carex lurida</i>	sedge, shallow
<i>Carex stipata</i>	sedge, stalk-grain
<i>Carex</i>	sedge, Walter's
<i>walteriana</i>	
<i>Carya aquatica</i>	hickory, water
<i>Cephalanthus</i>	buttonbush
<i>occidentalis</i>	
<i>Chamaecyparis</i>	cedar, Atlantic
<i>thyoides</i>	white
<i>Cicuta spp.</i>	water-hemlock
<i>Cirsium muticum</i>	thistle, swamp
<i>Cladium spp.</i>	sawgrass
<i>Cleistes</i>	rosebud
<i>divaricata</i>	
<i>Colocasia</i>	elephant's ear
<i>esculenta</i>	
<i>Coreopsis</i>	tickseed,
<i>nudata</i>	Georgia
<i>Cornus amomum</i>	dogwood, silky
<i>Crataegus</i>	mayhaw

<i>aestivalis</i>	
<i>Crinum</i>	swamp-lily,
<i>americanum</i>	southern
<i>Cyperus</i>	flatsedge,
<i>alternifolius</i>	alternate-leaf
<i>Cyperus</i>	flatsedge, jointed
<i>articulatus</i>	
<i>Cyperus</i>	flatsedge,
<i>difformis</i>	variable
<i>Cyperus</i>	flatsedge,
<i>distinctus</i>	marshland
<i>Cyperus</i>	flatsedge
<i>drummondii</i>	
<i>Cyperus</i>	flatsedge
<i>entrianus</i>	
<i>Cyperus</i>	flatsedge,
<i>erythrorhizos</i>	red-root
<i>Cyperus haspan</i>	flatsedge, sheathed
<i>Cyperus</i>	flatsedge,
<i>lanceolatus</i>	epiphytic
<i>Cyperus papyrus</i>	flatsedge, papyrus
<i>Decodon</i>	swamp-loosestr
<i>verticillatus</i>	ife
<i>Dichromena</i>	white-top
<i>latifolia</i>	sedge, giant
<i>Distichlis spicata</i>	saltgrass, seashore
<i>Drosera</i>	sundew,
<i>filiformis</i>	thread-leaf
<i>Drosera</i>	sundew,
<i>intermedia</i>	spoon-leaf
<i>Drosera tracyi</i>	sundew, Gulf coast
<i>Dulichium</i>	sedge, three-way
<i>arundinaceum</i>	
<i>Echinodorus</i>	burhead
<i>spp.</i>	
<i>Eleocharis spp.</i>	spikerush
<i>Erianthus</i>	plumegrass,
<i>giganteus</i>	sugarcane
<i>Erianthus</i>	plumegrass,
<i>strictus</i>	narrow
<i>Eriocaulon spp.</i>	pipewort
<i>Eryngium</i>	corn snakeroot
<i>aquaticum</i>	
<i>Eupatorium</i>	marsh
<i>leptophyllum</i>	thoroughwort

<i>Fimbristylis</i> spp. except	fringe-rush
<i>Fimbristylis annua</i>	fringe-rush, annual (FACW)
<i>F. puberula</i>	fringe-rush, Vahl's (FACW)
<i>F. spathacea</i>	hurricane-grass (FAC)
<i>Fraxinus</i> spp. except	ash
<i>Fraxinum americana</i>	ash, white (U)
<i>Fuirena</i> spp.	umbrella-sedge
<i>Gleditsia aquatica</i>	water-locust
<i>Glyceria striata</i>	fowl mannagrass
<i>Heteranthera reniformis</i>	mud-plantain, kidney-leaf
<i>Hibiscus coccineus</i>	rosemallow, scarlet
<i>Hibiscus grandiflorus</i>	rosemallow, swamp
<i>Hibiscus laevis</i>	rosemallow, halberd-leaf
<i>Hibiscus moscheutos</i>	rosemallow, swamp
<i>Hydrochloa caroliniensis</i>	watergrass
<i>Hydrocleis nymphoides</i>	water-poppy
<i>Hydrocotyle ranunculoides</i>	penny-wort, floating
<i>Hydrolea</i> spp.	false-fiddle-leaf
<i>Hygrophila</i> spp.	hygrophila
<i>Hymenachne amplexicaulis</i>	trompetilla
<i>Hymenocallis</i> spp.	spider-lily
<i>Hypericum chapmanii</i>	St. John's-wort, Chapman's
<i>Hypericum edisonianum</i>	St. John's-wort, Edison's
<i>Hypericum fasciculatum</i>	St. John's-wort, marsh
<i>Hypericum lissophloeus</i>	St. John's-wort, smooth-bark
<i>Hypericum nitidum</i>	St. John's-wort, Carolina

<i>Ilex amelanchier</i>	holly, sarvis
<i>Ilex cassine</i>	holly, dahoon
<i>Ilex myrtifolia</i>	holly, myrtle
<i>Ilex verticillata</i>	winterberry
<i>Illicium</i>	anise, Florida
<i>floridanum</i>	
<i>Impatiens</i>	touch-me-not,
<i>capensis</i>	spotted
<i>Iris spp.</i>	iris
except <i>I. verna</i>	dwarf iris (U)
<i>Isoetes spp.</i>	quillwort
<i>Itea virginica</i>	virginia willow
<i>Iva frutescens</i>	marsh elder
<i>Juncus spp.</i>	rush
except <i>J. tenuis</i>	rush (FAC)
<i>J. marginatus</i>	rush (FACW)
<i>Justicia spp.</i>	water-willow
except <i>J. brandegeana</i>	shrimp plant (U)
<i>Kosteletzkya</i>	
<i>virginica</i>	mallow, seashore
<i>Lachnocaulon</i>	
<i>digynum</i>	bogbutton,
<i>Lachnocaulon</i>	pineland
<i>engleri</i>	bogbutton,
<i>Lachnocaulon</i>	Engler's
<i>minus</i>	bogbutton,
<i>Laguncularia</i>	Small's
<i>racemosa</i>	mangrove, white
<i>Leersia spp.</i>	cutgrass
<i>Leitneria</i>	corkwood
<i>floridana</i>	
<i>Lilaeopsis spp.</i>	lilaeopsis
<i>Lilium iridollae</i>	lily, panhandle
<i>Limnobium</i>	frogbit
<i>spongia</i>	
<i>Limnophila spp.</i>	marshweed
<i>Limonium</i>	sea-lavender
<i>carolinianum</i>	
<i>Lindera</i>	spicebush,
<i>melissaefolia</i>	southern
<i>Linum westii</i>	flax, West's
<i>Liparis elata</i> =	liparis, tall
(<i>L. nervosa</i>)	
<i>Litsea aestivalis</i>	pondspice
<i>Lobelia</i>	cardinal flower
<i>cardinalis</i>	
<i>Lobelia</i>	
<i>floridana</i>	lobelia, Florida

<i>Ludwigia spp.</i>	ludwigia; water-primrose
except	seedbox, hairy
<i>Ludwigia hirtella</i>	(FACW)
<i>Ludwigia</i>	seedbox,
<i>maritima</i>	seaside (FACW)
<i>L. suffruticosa</i>	seedbox, headed (FACW)
<i>Ludwigia</i>	seedbox,
<i>virgata</i>	savanna (FACW)
<i>Lycium</i>	Christmas berry
<i>carolinianum</i>	
<i>Lycopus spp.</i>	bugleweed
<i>Lysimachia spp.</i>	loosestrife
<i>Lythrum spp.</i>	marsh loosestrife
<i>Macranthera</i>	flameflower
<i>flammea</i>	
<i>Magnolia</i>	magnolia,
<i>virginiana</i>	sweetbay
<i>var. australis</i>	
<i>Malaxis spicata</i>	adder's-mouth, Florida
<i>Maxillaria</i>	orchid, hidden
<i>crassifolia</i>	
<i>Melanthium</i>	bunchflower,
<i>virginicum</i>	Virginia
<i>Micranthemum</i>	baby tears
<i>spp.</i>	
<i>Micromeria</i>	savory, Brown's
<i>brownei</i>	
<i>Mimulus alatus</i>	monkey-flower
<i>Monanthochloe</i>	keygrass
<i>littoralis</i>	
<i>Muhlenbergia</i>	muhly grass
<i>capillaris</i>	
<i>Nasturtium spp.</i>	water-cress
<i>Nelumbo spp.</i>	water-lotus
<i>Nuphar luteum</i>	cow-lily, yellow
<i>Nymphaea spp.</i>	water-lily
<i>Nymphoides</i>	floating hearts
<i>spp.</i>	
<i>Nyssa aquatica</i>	tupelo, water
<i>Nyssa ogeche</i>	tupelo, ogeechee
<i>Nyssa sylvatica</i>	tupelo, swamp
<i>var. biflora</i>	
<i>Orontium</i>	golden club
<i>aquaticum</i>	
<i>Osmunda regalis</i>	fern, royal

<i>Oxypolis spp.</i>	water drop-wort
<i>Panicum ensifolium</i>	panic grass
<i>Panicum erectifolium</i>	witchgrass, erect-leaf
<i>Panicum gymnocarpon</i>	panicum, savannah
<i>Panicum hemitomon</i>	maidencane
<i>Panicum longifolium</i>	panicum, tall thin
<i>Panicum scabriusculum</i>	panicum, woolly
<i>Panicum tenerum</i>	panicum, bluejoint
<i>Parnassia spp.</i>	grass-of-parnas sus
<i>Paspalidium geminatum</i>	water panicum
<i>Paspalum dissectum</i>	paspalum, mudbank
<i>Paspalum distichum</i>	paspalum, joint
<i>Paspalum monostachyum</i>	paspalum, gulf
<i>Paspalum praecox</i>	paspalum, early
<i>Paspalum repens</i>	paspalum, water
<i>Peltandra spp.</i>	arum; spoon flower
<i>Penthorum sedoides</i>	ditch stonecrop
<i>Pentodon pentandrus</i>	pentodon, Hall's
<i>Persea palustris</i>	bay, swamp
<i>Phragmites australis</i>	reed, common
<i>Physostegia godfreyi</i>	dragon-head, Godfrey's
<i>Physostegia leptophylla</i>	dragon-head, slender-leaf
<i>Pinckneya bracteata</i>	fever-tree
<i>Pinguicula spp.</i>	butterwort
<i>Planera aquatica</i>	planer tree
<i>Platanthera spp.</i>	orchid, fringed
<i>Pleea tenuifolia</i>	rush-featherling
<i>Pogonia</i>	pogonia, rose

<i>ophioglossoides</i>	
<i>Polygala cymosa</i>	milkwort, tall
<i>Polygonum spp.</i>	smartweed
except	
<i>P. argyrocoleon</i>	smartweed, silversheath (U)
<i>P. virginianum</i>	jumpseed (FACW)
<i>Pontederia</i>	pickerelweed
<i>cordata</i>	
<i>Populus</i>	cottonwood,
<i>heterophylla</i>	swamp
<i>Proserpinaca</i>	mermaid-weed
<i>spp.</i>	
<i>Psilocarya spp.</i>	baldrush
<i>Quercus lyrata</i>	oak, overcup
<i>Rhexia</i>	meadow-beauty
<i>parviflora</i>	white
<i>Rhexia</i>	meadow-beauty
<i>salicifolia</i>	panhandle
<i>Rhizophora</i>	mangrove, red
<i>mangle</i>	
<i>Rhynchospora</i>	beakrush,
<i>cephalantha</i>	clustered
<i>Rhynchospora</i>	beakrush,
<i>chapmanii</i>	Chapman's
<i>Rhynchospora</i>	beakrush,
<i>corniculata</i>	short-bristle
<i>Rhynchospora</i>	
<i>decurrens</i>	beakrush, swamp-forest
<i>Rhynchospora</i>	beakrush,
<i>divergens</i>	spreading
<i>Rhynchospora</i>	beakrush,
<i>harperi</i>	Harper's
<i>Rhynchospora</i>	beakrush, horned
<i>inundata</i>	
<i>Rhynchospora</i>	beakrush, large
<i>macra</i>	
<i>Rhynchospora</i>	beakrush,
<i>microcarpa</i>	southern
<i>Rhynchospora</i>	beakrush, millet
<i>miliacea</i>	
<i>Rhynchospora</i>	beakrush,
<i>mixta</i>	mingled
<i>Rhynchospora</i>	beakrush,
<i>oligantha</i>	few-flower
<i>Rhynchospora</i>	beakrush,
<i>stenophylla</i>	Chapman's

<i>Rhynchospora</i>	beakrush,
<i>tracyi</i>	Tracy's
<i>Rorippa spp.</i>	yellow-cress
<i>Rosa palustris</i>	rose, swamp
<i>Rotala ramosior</i>	toothcup
<i>Rudbeckia</i>	coneflower,
<i>mohrii</i>	Mohr's
<i>Sabatia</i>	rose-gentian,
<i>bartramii</i>	Bartram's
<i>Sabatia calycina</i>	rose-gentian,
	coast
<i>Sabatia</i>	rose-gentian,
<i>dodecandra</i>	large
<i>Sacciolepis</i>	cupscale,
<i>striata</i>	American
<i>Sagittaria spp.</i>	arrowhead
<i>Salicornia spp.</i>	glasswort
<i>Salix spp.</i>	willow
<i>Samolus spp.</i>	pimpernel, water
<i>Sarracenia spp.</i>	pitcher-plant
except	
<i>Sarracenia</i>	pitcher-plant,
<i>minor</i>	hooded (FACW)
<i>Saururus</i>	lizard's tail
<i>cernuus</i>	
<i>Scirpus spp.</i>	bulrush
<i>Scutellaria</i>	skullcap, blue
<i>lateriflora</i>	
<i>Scutellaria</i>	skullcap
<i>racemosa</i>	
<i>Senecio aureus</i>	ragwort, golden
<i>Senecio</i>	butterweed
<i>glabellus</i>	
<i>Setaria magna</i>	foxtail
<i>Sium suave</i>	water-parsnip
<i>Solidago elliotii</i>	golden-rod,
	Elliott's
<i>Solidago patula</i>	golden-rod,
	rough-leaf
<i>Sparganium</i>	burreed
<i>americanum</i>	
<i>Spartina</i>	cordgrass,
<i>alterniflora</i>	saltmarsh
<i>Spartina</i>	cordgrass, big
<i>cynosuroides</i>	
<i>Spartina</i>	cordgrass, gulf
<i>spartinae</i>	
<i>Spergularia</i>	sandspurry,
<i>marina</i>	saltmarsh

<i>Sphagnum spp.</i>	sphagnum moss
<i>Sphenopholis</i>	wedgescale,
<i>pennsylvanica</i>	swamp
<i>Sporobolus</i>	dropseed,
<i>virginicus</i>	seashore
<i>Stachys</i>	hedgenettle
<i>lythroides</i>	
<i>Stillingia</i>	corkwood
<i>aquatica</i>	
<i>Styrax</i>	snowbell; storax
<i>americana</i>	
<i>Suaeda spp.</i>	sea-blite
<i>Taxodium</i>	cypress, pond
<i>ascendens</i>	
<i>Taxodium</i>	cypress, bald
<i>distichum</i>	
<i>Thalia</i>	thalia; fire flag
<i>geniculata</i>	
<i>Tofieldia</i>	false-asphodel,
<i>racemosa</i>	coastal
<i>Triadenum spp.</i>	St. John's-wort,
	marsh
<i>Triglochin</i>	arrow-grass
<i>striatam</i>	
<i>Typha spp.</i>	cattail
<i>Utricularia spp.</i>	bladderwort
<i>Veronica</i>	speedwell, water
<i>anagallis-aquat</i>	
<i>ica</i>	
<i>Vicia ocalensis</i>	vetch, Ocala
<i>Viola lanceolata</i>	violet, lance-leaf
<i>Websteria</i>	water-meal
<i>confervoides</i>	
<i>Woodwardia</i>	chainfern
<i>aereolata</i>	
<i>Xyris spp.</i>	yellow-eyed
	grass
except	
<i>Xyris</i>	yellow-eyed
<i>caroliniana</i>	grass, Carolina
	(FACW)
<i>Xyris jupicai</i>	yellow-eyed
	grass, tropical
	(FACW)
<i>Zizania aquatica</i>	wildrice
<i>Zizaniopsis</i>	wildrice,
<i>miliacea</i>	southern
(2) Facultative Wet Species	
<i>Abildgaardia</i>	rush, flat-spike

<i>ovata</i>	
<i>Acer negundo</i>	box-elder
<i>Acer rubrum</i>	maple, red
<i>Aeschynomene indica</i>	joint-vetch, India
<i>Agalinis aphylla</i>	false-foxglove, scale-leaf
<i>Agalinis pinetorum</i> (= <i>A. pulchella</i>)	false-foxglove
<i>Agalinis purpurea</i>	false-foxglove, large purple
<i>Agarista populifolia</i>	hobble-bush
<i>Agrostis stolonifera</i>	redtop
<i>Amorpha fruticosa</i>	indigo-bush
<i>Amphicarpum muhlenbergianum</i>	blue maidencane
<i>Amsonia rigida</i>	slimpod, stiff
<i>Amsonia tabernaemontana</i>	slimpod, eastern
<i>Andropogon glomeratus</i> (Campbell)	bluestem, bushy
<i>Andropogon liebmanii</i> var. <i>pungensis</i> (Campbell) (<i>A. mohrii</i>)	bluestem, Mohr's
<i>Anthraenantia rufa</i>	silky-scale, purple
<i>Apteria aphylla</i>	nodding nixie
<i>Arenaria godfreyi</i>	stitchwort, Godfrey's
<i>Arisaema spp.</i>	jack-in-the-pulpit; green-dragon
<i>Aristida purpurascens</i> (s.l.)	three-awn grass, wand-like
<i>Arnoglossum diversifolium</i>	indian-plantain, variable-leaf
<i>Arnoglossum ovatum</i>	indian-plantain, egg-leaf
<i>Aronia arbutifolia</i>	red chokeberry

<i>Arundinaria gigantea</i>	giant cane
<i>Asclepias connivens</i>	milkweed, large-flower
<i>Asclepias longifolia</i>	milkweed, long-leaf
<i>Asclepias pedicellata</i>	milkweed, savannah
<i>Asclepias viridula</i>	milkweed, southern
<i>Aster chapmanii</i>	aster, savannah
<i>Aster eryngiifolius</i>	aster, coyote-thistle
<i>Aster lateriflorus</i>	aster, calico
<i>Aster spinulosus</i>	aster, bog
<i>Aster vimineus</i>	aster, small white
<i>Athyrium filix-femina</i>	fern, subarctic lady
<i>Atriplex patula</i>	saltbush, halberd-leaf
<i>Balduina atropurpurea</i>	honeycomb-head, purple
<i>Balduina uniflora</i>	honeycomb-head, one-flower
<i>Bartonia spp.</i>	screwstem
<i>Bigelovia nudata</i>	golden-rod, rayless
<i>Blechnum serrulatum</i>	swamp fern
<i>Boltonia spp.</i>	boltonia
<i>Brachiaria purpurascens</i>	paragrass
<i>Cacalia suaveolens</i>	indian-plantain, sweet-scent
<i>Calamovilfa curtissii</i>	Curtiss' reed grass
<i>Calopogon spp.</i>	grass-pinks
<i>Calyocarpum lyonii</i>	cupseed
<i>Caperonia spp.</i>	caperonia
<i>Capparis flexuosa</i>	caper-tree
<i>Carex spp.</i>	sedges
except	
<i>Carex atlantica</i>	sedge, prickly bog (OBL)
<i>Carex comosa</i>	sedge, bearded (OBL)

<i>Carex crinita</i>	sedge, fringed (OBL)
<i>Carex crus-corvi</i>	sedge, raven-foot (OBL)
<i>Carex decomposita</i>	sedge, cypress-knee (OBL)
<i>Carex elliotii</i>	sedge, Elliott's (OBL)
<i>Carex folliculata</i>	sedge, long (OBL)
<i>Carex gigantea</i>	sedge, large (OBL)
<i>Carex howei</i>	sedge, Howe's (OBL)
<i>Carex hyalinolepis</i>	sedge, shoreline (OBL)
<i>Carex leptalea</i>	sedge, bristly-stalk (OBL)
<i>Carex louisianica</i>	sedge, Louisiana (OBL)
<i>Carex lupulina</i>	sedge, hop (OBL)
<i>Carex lurida</i>	sedge, shallow (OBL)
<i>Carex stipata</i>	sedge, stalk-grain (OBL)
<i>Carex walteriana</i>	sedge, Walter's (OBL)
<i>Carphephorus carnosus</i>	chaffhead, pineland
<i>Carphephorus pseudoliatris</i>	chaffhead, bristle-leaf
<i>Carpinus caroliniana</i>	hornbeam, American
<i>Celtis laevigata</i>	sugar-berry; hackberry
<i>Centella asiatica</i>	coinwort
<i>Chaptalia tomentosa</i>	sunbonnet; pineland daisy
<i>Chasmanthium spp.</i>	spanglegrass
except	
<i>C. latifolium</i>	
<i>C. sessiliflorum</i>	longleaf

<i>Chrysobalanus icaco</i>	Chasmanthium cocoplum
<i>Cirsium lecontei</i>	thistle, Leconte's
<i>Cirsium nuttallii</i>	thistle, Nuttall's
<i>Clethra alnifolia</i>	sweet pepper bush
<i>Cliftonia monophylla</i>	buckwheat-tree
<i>Commelina spp.</i> except	dayflower
<i>Commelina erecta</i>	dayflower, sandhill (U)
<i>Conocarpus erectus</i>	buttonwood
<i>Coreopsis falcata</i>	tickseed, sickle
<i>Coreopsis floridana</i>	tickseed, Florida
<i>Coreopsis gladiata</i>	tickseed, southeastern
<i>Coreopsis integrifolia</i>	tickseed, ciliate-leaf
<i>Coreopsis leavenworthii</i>	tickseed, Leavenworth's
<i>Coreopsis linifolia</i>	tickseed, Texas
<i>Cornus foemina</i>	swamp dogwood
<i>Crataegus marshallii</i>	haw, parsley
<i>Crataegus viridis</i>	haw, green
<i>Croton elliotii</i>	croton, Elliott's
<i>Ctenitis submarginalis</i>	fern, brown-hair comb
<i>Ctenium spp.</i>	toothache grass
<i>Cuphea aspera</i>	common waxweed
<i>Cyperus spp.</i> except	flatsedge
<i>C. alternifolius</i>	flatsedge, alternate-leaf (OBL)
<i>Cyperus articulatus</i>	flatsedge, jointed (OBL)
<i>Cyperus difformis</i>	flatsedge, variable (OBL)
<i>Cyperus distinctus</i>	flatsedge, marshland

	(OBL)
<i>Cyperus drummondii</i>	flatsedge (OBL)
<i>Cyperus entrerianus</i>	flatsedge (OBL)
<i>C. erythrorhizos</i>	flatsedge, red-root (OBL)
<i>Cyperus haspan</i>	flatsedge, sheathed (OBL)
<i>Cyperus lanceolatus</i>	flatsedge, epiphytic (OBL)
<i>Cyperus papyrus</i>	flatsedge, papyrus (OBL)
<i>Cyperus cuspidatus</i>	flatsedge, coastal-plain (FAC)
<i>Cyperus esculentus</i>	flatsedge (FAC)
<i>Cyperus giganteus</i>	flatsedge (FAC)
<i>Cyperus globulosus</i>	flatsedge, baldwin (FAC)
<i>Cyperus huarmensis</i>	flatsedge, black knotty-root (FAC)
<i>Cyperus metzii</i>	flatsedge (FAC)
<i>Cyperus retrorsus</i>	flatsedge (FAC)
<i>Cyperus rotundus</i>	flatsedge, purple (FAC)
<i>Cyperus filiculmis</i>	flatsedge, sandhill (U)
<i>Cyperus ovularis</i>	flatsedge (U)
<i>Cyperus reflexus</i>	flatsedge (U)
<i>Cyperus refractus</i>	flatsedge (U)
<i>C. retrofractus</i>	flatsedge (U)
<i>Cyperus tetragonus</i>	flatsedge (U)
<i>Dichromena colorata</i>	white-top sedge, starbrush
<i>Dichromena floridensis</i>	white-top sedge, Everglades
<i>Dicliptera brachiata</i>	mudwort, wild
<i>Digitaria</i>	everglades grass

<i>pauciflora</i>	
<i>Diodia virginiana</i>	button-weed
<i>Dionaea muscipula</i>	Venus' flytrap
<i>Drosera brevifolia</i>	sundew, dwarf
<i>Drosera capillaris</i>	sundew, pink
<i>Dryopteris ludoviciana</i>	shield-fern, southern
<i>Dyschoriste humistrata</i>	dyschoriste, swamp
<i>Echinochloa spp.</i>	jungle-rice; cockspear grass
<i>Eclipta alba</i>	yerba de Tajo
<i>Elyonurus tripsacoides</i>	balsam-scale, Pan-American
<i>Equisetum hyemale</i>	horsetail
<i>Erianthus brevibarbus</i>	plume grass, short-beard
<i>Erigeron vernus</i>	fleabane, early whitetop
<i>Eriochloa spp.</i>	cupgrass
<i>Eryngium integrifolium</i>	coyote-thistle, blue-flower
<i>Eryngium prostratum</i>	coyote-thistle, creeping
<i>Eryngium yuccifolium</i>	rattlesnake master
<i>Erythrodes quercetica</i>	erythrodes, low
<i>Eulophia alta</i>	coco, wild
<i>Eupatoriadelphus fistulosus</i>	joe-pye-weed
<i>Eupatorium leucolepis</i>	thoroughwort, white-bract
<i>Eupatorium mikanioides</i>	thoroughwort, semaphore
<i>Eupatorium perfoliatum</i>	boneset
<i>Euphorbia humistrata</i> (= <i>Chamaesyce humistrata</i>)	broomspurge, spreading
<i>Euphorbia inundata</i>	spurge, Florida
<i>Euphorbia</i>	spurge,

<i>polyphylla</i>	many-leaved
<i>Eustachys</i>	fingergrass,
<i>glauca</i>	saltmarsh
(= <i>Chloris</i>	
<i>glauca</i>)	
<i>Eustoma</i>	prairie-gentian
<i>exaltatum</i>	
<i>Evolvulus</i>	evolvulus
<i>convolvuloides</i>	
<i>Evolvulus</i>	silky bindweed
<i>sericeus</i>	
<i>Fimbristylis</i>	fimbry, annual
<i>annua</i>	
<i>Fimbristylis</i>	fimbry, Vahl's
<i>puberula</i>	hairy
<i>Flaveria</i>	yellowtop
<i>floridana</i>	
<i>Flaveria linearis</i>	yellowtop
<i>Forestiera</i>	privet, swamp
<i>acuminata</i>	
<i>Fothergilla</i>	witch-alder,
<i>gardenii</i>	dwarf
<i>Galium</i>	bedstraw, stiff
<i>tinctorium</i>	marsh
<i>Gaylussacia</i>	woolly-berry
<i>mosieri</i>	
<i>Gentiana</i> spp.	gentian
<i>Gleditsia</i>	honey-locust
<i>triacanthos</i>	
<i>Gordonia</i>	bay, loblolly
<i>lasianthus</i>	
<i>Gratiola</i> spp.	hedgelyssop
except	
<i>Gratiola hispida</i>	hedgelyssop (FAC)
<i>Habenaria</i> spp.	rein orchid
<i>Halesia diptera</i>	silver-bell
<i>Harperocallis</i>	Harper's beauty
<i>flava</i>	
<i>Hartwrightia</i>	hartwrightia,
<i>floridana</i>	Florida
<i>Hedychium</i>	ginger
<i>coronarium</i>	
<i>Helenium</i> spp.	sneezeweed
except	
<i>Helenium</i>	sneezeweed,
<i>amarum</i>	pasture (FAC)
<i>Helianthus</i>	sunflower,
<i>agrestis</i>	southeastern

<i>Helianthus angustifolius</i>	sunflower, swamp
<i>Helianthus carnosus</i>	sunflower, lakeside
<i>Helianthus heterophyllus</i>	sunflower, wetland
<i>Helianthus simulans</i>	sunflower, muck
<i>Heliotropium procumbens</i>	heliotrope, four-spike
<i>Hemicarpha</i> spp.	dwarf-bullrush
<i>Hibiscus aculeatus</i>	rosemallow
<i>Hydrocotyle</i> spp.	pennywort
except <i>H. ranunculoides</i>	pennywort, floating (OBL)
<i>Hypericum</i> spp. except <i>Hypericum chapmanii</i>	St. John's-wort
<i>H. edisonianum</i>	St. John's-wort, Chapman's (OBL)
<i>H. fasciculatum</i>	St. John's-wort, Edison's (OBL) marsh (OBL)
<i>H. lissophloeus</i>	St. John's-wort, smooth-bark (OBL)
<i>Hypericum nitidum</i>	St. John's-wort, Carolina (OBL)
<i>H. hypericoides</i>	St. Andrew's cross (FAC)
<i>H. tetrapetalum</i>	St. John's-wort, four-petal (FAC)
<i>H. cumulicola</i>	St. John's-wort, scrub (U)
<i>H. drummondii</i>	St. John's-wort, Drummond's (U)
<i>H. gentianoides</i>	pineweed (U)
<i>H. microsepalum</i>	St. John's-wort, small-sepal (U)
<i>H. prolificum</i>	St. John's-wort, shrubby (U)
<i>Hypericum punctatum</i>	St. John's-wort, dotted (U)
<i>Hypericum</i>	St. John's-wort,

<i>reductum</i>	Atlantic (U)
<i>Hypolepis</i>	fern, bead
<i>repens</i>	
<i>Hypoxis</i> spp.	stargrasses, yellow
<i>Hyptis alata</i>	musky mint
<i>Ilex coriacea</i>	holly, bay-gall
<i>Ilex decidua</i>	holly, deciduous
<i>Illicium</i>	star anise
<i>parviflorum</i>	
<i>Iva</i>	little marsh elder
<i>microcephala</i>	
<i>Juncus</i>	shore rush
<i>marginatus</i>	
<i>Kalmia latifolia</i>	laurel, mountain
<i>Lachnocaulon</i>	bogbutton,
<i>anceps</i>	white-head
<i>Lachnocaulon</i>	bogbutton,
<i>beyrichianum</i>	southern
<i>Laportea</i>	wood-nettle,
<i>canadensis</i>	Canada
<i>Leptochloa</i> spp.	sprangle-top
except	
<i>Leptochloa</i>	sprangle-top,
<i>virgata</i>	tropic (FAC)
<i>Leucothoe</i> spp.	dog-hobble
<i>Liatris garberi</i>	gayfeather, garber's
<i>Lindera benzoin</i>	spicebush, northern
<i>Lindernia</i> spp.	false-pimpernel
except	
<i>Lindernia</i>	false-pimpernel,
<i>crustacea</i>	<i>Malayan</i> (FAC)
<i>Linum carteri</i>	flax, Carter's
<i>Linum striatum</i>	flax, ridged yellow
<i>Lipocarpa</i> spp.	lipocarpa
<i>Liquidambar</i>	sweetgum
<i>styraciflua</i>	
<i>Liriodendron</i>	tulip tree
<i>tulipifera</i>	
<i>Listera</i> spp.	twayblade
<i>Lobelia</i> spp.	lobelia
except	
<i>Lobelia</i>	flower, cardinal
<i>cardinalis</i>	(OBL)
<i>Lobelia</i>	lobelia, Florida

<i>floridana</i>	(OBL)
<i>Lophiola americana</i>	golden-crest
<i>Ludwigia hirtella</i>	seedbox, hairy
<i>Ludwigia maritima</i>	seedbox, seaside
<i>Ludwigia suffruticosa</i>	seedbox, headed
<i>Ludwigia virgata</i>	seedbox, savanna
<i>Lycopodium spp.</i>	clubmoss
<i>Lyonia lucida</i>	fetter-bush
<i>Lyonia mariana</i>	fetter-bush
<i>Macbridea spp.</i>	birds-in-a-nest
<i>Manisuris spp.</i>	jointgrass
except <i>M. cylindrica</i>	jointgrass, pitted (FAC)
<i>Marshallia graminifolia</i>	barbara's-button s, grass-leaf
<i>Marshallia tenuifolia</i>	barbara's-button s, slim-leaf
<i>Mecardonia spp.</i>	mecardonia
<i>Melanthera nivea</i>	squarestem
<i>Mitreola spp.</i>	hornpod
<i>Muhlenbergia schreberi</i>	nimblewill
<i>Myrica heterophylla</i>	bayberry, evergreen
<i>Myrica inodora</i>	bayberry, odorless
<i>Nemastylis floridana</i>	pleatleaf, fall-flowering
<i>Nemophila aphylla</i>	baby-blue-eyes, small-flower
<i>Oldenlandia spp.</i>	bluets, water
<i>Onoclea sensibilis</i>	fern, sensitive
<i>Osmunda cinnamomea</i>	fern, cinnamon
<i>Panicum abscissum (Hall)</i>	cut-throat grass
<i>Panicum dichotomiflorum</i>	panicum, fall
<i>Panicum</i>	panicum

<i>dichotomum</i>	
<i>Panicum</i>	panicum
<i>pinetorum</i>	
<i>Panicum repens</i>	grass, torpedo
<i>Panicum</i>	panicum, red-top
<i>rigidulum</i>	
<i>Panicum</i>	panicum
<i>scoparium</i>	
<i>Panicum spretum</i>	panicum
<i>Panicum</i>	panicum, warty
<i>verrucosum</i>	
<i>Panicum</i>	switchgrass
<i>virgatum</i>	
<i>Paspalum</i>	paspalum, brook
<i>acuminatum</i>	
<i>Paspalum</i>	paspalum, bull
<i>boscianum</i>	
<i>Paspalum</i>	paspalum,
<i>floridanum</i>	Florida
<i>Paspalum laeve</i>	paspalum, field
<i>Paspalum</i>	paspalum,
<i>pubiflorum</i>	hairy-seed
<i>Pavonia spicata</i>	mangrove mallow
<i>Philoxerus</i>	silverhead
<i>vermicularis</i>	
<i>Phyllanthus</i>	leaf-flower,
<i>caroliniensis</i>	Carolina
<i>Phyllanthus</i>	leaf-flower,
<i>liebmannianus</i>	Florida
<i>Physostegia</i>	dragon-head,
<i>purpurea</i>	purple
<i>Physostegia</i>	dragon-head,
<i>virginiana</i>	false
<i>Pieris</i>	fetter-bush,
<i>phillyreifolia</i>	climbing
<i>Pilea spp.</i>	clearweed
<i>Pinus glabra</i>	pine, spruce
<i>Pinus serotina</i>	pine, pond
<i>Platanus</i>	sycamore
<i>occidentalis</i>	
<i>Pluchea spp.</i>	camphor-weed
<i>Polygala spp.</i>	milkwort
except	
<i>Polygala</i>	milkwort, tall
<i>cymosa</i>	yellow (OBL)
<i>P. leptostachys</i>	milkwort, sandhill (U)
<i>Polygala</i>	milkwort, scrub

<i>lewtonii</i>	(U)
<i>Polygala</i>	milkwort,
<i>polygama</i>	racemed (U)
<i>P. verticillata</i>	milkwort, whorled (U)
<i>Polygonum</i>	jumpseed
<i>virginianum</i>	
<i>Ponthieva</i>	shadow-witch
<i>racemosa</i>	
<i>Populus</i>	cotton-wood,
<i>deltoides</i>	eastern
<i>Pteris tripartita</i>	brake, giant
<i>Ptilimnium</i>	mock
<i>capillaceum</i>	bishop-weed
<i>Pycnanthemum</i>	mountain-mint,
<i>nudum</i>	coastal-plain
<i>Quercus</i>	oak, laurel
<i>laurifolia</i>	
<i>Quercus</i>	oak, swamp
<i>michauxii</i>	chestnut
<i>Quercus nigra</i>	oak, water
<i>Quercus pagoda</i>	oak, cherry-bark
<i>Quercus phellos</i>	oak, willow
<i>Ranunculus spp.</i>	butter-cup
<i>Reimarochloa</i>	grass, Florida
<i>oligostachya</i>	reimar
<i>Rhapidophyllu</i>	palm, needle
<i>m hystrix</i>	
<i>Rhexia spp.</i>	meadow-beauty
except	
<i>Rhexia</i>	meadow-beauty
<i>parviflora</i>	white (OBL)
<i>Rhexia</i>	meadow-beauty
<i>salicifolia</i>	panhandle (OBL)
<i>Rhododendron</i>	azalea, swamp
<i>viscosum</i>	
<i>Rhynchospora</i>	beakrush
<i>spp.</i>	
except	
<i>R. cephalantha</i>	beakrush, clustered (OBL)
<i>R. chapmanii</i>	beakrush, Chapman's (OBL)
<i>R. corniculata</i>	beakrush, short-bristle (OBL)
<i>R. decurrens</i>	beakrush,

	swamp-forest (OBL)
<i>R. divergens</i>	beakrush, <i>spreading</i> (OBL)
<i>R. harperi</i>	beakrush, <i>Harper's</i> (OBL)
<i>R. inundata</i>	beakrush, <i>horned</i> (OBL)
<i>Rhynchospora macra</i>	beakrush, large (OBL)
<i>R. microcarpa</i>	beakrush, <i>southern</i> (OBL)
<i>R. miliacea</i>	beakrush, millet (OBL)
<i>Rhynchospora mixta</i>	beakrush, mingled (OBL)
<i>R. oligantha</i>	beakrush, <i>few-flower</i> (OBL)
<i>R. stenophylla</i>	beakrush, Chapman's (OBL)
<i>Rhynchospora tracyi</i>	beakrush, Tracy's (OBL)
<i>Rhynchospora grayi</i>	beakrush, Gray's (U)
<i>R. intermedia</i>	beakrush, pinebarren (U)
<i>R. megalocarpa</i>	beakrush, giant-fruited (U)
<i>Roystonea spp.</i>	palm, royal
<i>Rudbeckia fulgida</i>	coneflower, orange
<i>Rudbeckia graminifolia</i>	coneflower, grass-leaf
<i>Rudbeckia laciniata</i>	coneflower, cut-leaf
<i>Rudbeckia nitida</i>	coneflower, shiny
<i>Ruellia noctiflora</i>	wild-petunia, night-flowering
<i>Rumex spp.</i>	dock
<i>Sabal minor</i>	palmetto, dwarf
<i>Sabatia spp.</i>	rose-gentian
except	
<i>Sabatia bartramii</i>	rose-gentian, Bartram's (OBL)
<i>Sabatia calycina</i>	rose-gentian, <i>coast</i> (OBL)

<i>Sabatia</i>	rose-gentian,
<i>dodecandra</i>	large (OBL)
<i>Sachsia</i>	sachsia
<i>polycephala</i>	
<i>Sarracenia</i>	pitcher-plant,
<i>minor</i>	hooded
<i>Schoenolirion</i>	
<i>croceum</i>	sunny bells
<i>Schoenolirion</i>	sunny bells
<i>elliottii</i>	
<i>Schoenus</i>	black-sedge
<i>nigricans</i>	
<i>Scleria spp.</i>	nutrush
<i>Sclerolepis</i>	hardscale, one
<i>uniflora</i>	flower
<i>Selaginella</i>	spike-moss,
<i>apoda</i>	meadow
<i>Sesuvium spp.</i>	sea-purslane
<i>Sisyrinchium</i>	blue-eye-grass,
<i>atlanticum</i>	eastern
<i>Sisyrinchium</i>	blue-eye-grass
<i>capillare</i>	
<i>Sisyrinchium</i>	blue-eye-grass,
<i>mucronatum</i>	Michaux's
<i>Solanum</i>	canker-berry
<i>bahamense</i>	
<i>Solanum</i>	night-shade,
<i>erianthum</i>	shrub
<i>Solidago</i>	golden-rod,
<i>fistulosa</i>	marsh
<i>Solidago</i>	golden-rod,
<i>leavenworthii</i>	leavenworth's
<i>Solidago</i>	golden-rod,
<i>sempervirens</i>	seaside
<i>Solidago stricta</i>	golden-rod,
	willow-leaf
<i>Sophora</i>	coast sophora
<i>tomentosa</i>	
<i>Spartina bakeri</i>	cordgrass, sand
<i>Spartina patens</i>	cordgrass,
	saltmeadow
<i>Spermacoce</i>	button-plant,
<i>glabra</i>	smooth
<i>Sphenoclea</i>	chicken-spike
<i>zeylandica</i>	
<i>Sphenostigma</i>	ixia, Bartram's
<i>coelestinum</i>	
<i>Spigelia</i>	pink-root
<i>loganioides</i>	

<i>Spilanthes americana</i>	spotflower, creeping
<i>Spiranthes spp.</i>	ladies'-tresses
<i>Sporobolus floridanus</i>	dropseed, Florida
<i>Staphylea trifolia</i>	bladdernut, American
<i>Stenandrium floridanum</i>	stenandrium
<i>Stenanthium gramineum</i>	feather-bells, eastern
<i>Stipa avenacioides</i>	grass, Florida
<i>Stokesia laevis</i>	needle stokesia
<i>Syngonanthus flavidulus</i>	bantam-buttons
<i>Teucrium canadense</i>	germander, American
<i>Thalictrum spp.</i>	meadow-rue
<i>Thelypteris spp.</i>	shield fern
<i>Tilia americana</i>	American basswood
<i>Toxicodendron vernix</i>	poison sumac
<i>Trachelospermum difforme</i>	climbing-dogbane
<i>Trepocarpus aethusae</i>	trepocarpus, aethusa-like
<i>Trianthema portulacastrum</i>	horse-purslane
<i>Tridens ambiguus</i>	tridens, savannah
<i>Tridens strictus</i>	tridens, long-spike
<i>Triphora spp.</i>	pogonias, nodding
<i>Ulmus spp.</i>	elm
except <i>Ulmus rubra</i>	elm, slippery (U)
<i>Urechites lutea</i>	allamanda, wild
<i>Uvularia floridana</i>	bellwort, Florida
<i>Vaccinium corymbosum</i>	blueberry, highbush
<i>Verbena scabra</i>	vervain, sandpaper
<i>Verbesina chapmanii</i>	crownbeard, Chapman's

<i>Verbesina heterophylla</i>	crownbeard, diverse-leaf
<i>Vernonia spp.</i>	ironweed
except <i>V. angustifolia</i>	ironweed, narrow-leaf (U)
<i>Veronicastrum virginicum</i>	culver's root
<i>Viburnum dentatum</i>	arrow-wood
<i>Viburnum nudum</i>	viburnum, possum-haw
<i>Viburnum obovatum</i>	viburnum, walter
<i>Vicia acutifolia</i>	vetch, four-leaf
<i>Vicia floridana</i>	vetch, Florida
<i>Viola affinis</i>	violet, Leconte's
<i>Viola esculenta</i>	violet, edible
<i>Viola primulifolia</i>	violet, primrose-leaf
<i>Woodwardia virginica</i>	chainfern
<i>Xanthorhiza simplicissima</i>	yellow-root, shrubby
<i>Xanthosoma sagittifolium</i>	elephant ear
<i>Xyris caroliniana</i>	yellow-eyed-gr ass, Carolina
<i>Xyris jupicai</i>	yellow-eyed-gr ass, Richard's
<i>Yeatesia viridiflora</i>	yeatesia, green-flower
<i>Zephyranthes atamasco</i>	lily, atamasco
<i>Zigadenus densus</i>	crow poison
<i>Zigadenus glaberrimus</i>	deathcamas, Atlantic

Within Monroe County and the Key Largo portion of Miami-Dade County only, the following species shall be listed as Facultative Wet:

<i>Alternanthera maritima</i>	beach alternanthera
<i>Morinda royoc</i>	Keys rhubarb
<i>Strumpfia maritima</i>	strumpfia
(3) Facultative Species	
<i>Acacia auriculiformis</i>	ear-leaved acacia
<i>Aletris spp.</i>	colic-root

<i>Alopecurus carolinianus</i>	foxtail, tufted
<i>Anagallis pumila</i>	pimpernel, Florida
<i>Andropogon arctatus</i> (Campbell)	bluestem, savannah
<i>Andropogon brachystachys</i> (Campbell)	bluestem, short-spike
<i>Andropogon gerardii</i> (Campbell)	bluestem, big
<i>Andropogon perangustatus</i> (Campbell)	bluestem, slim
<i>Andropogon virginicus</i> (Campbell)	broom-sedge
<i>Ardisia spp.</i>	marlberry
<i>Aristida rhizomophora</i>	grass, rhizomatous three-awn
<i>Aristida spiciformis</i>	bottlebrush, three-awn
<i>Aristida stricta</i>	grass, pineland three-awn
<i>Arundo donax</i>	reed, giant
<i>Aster dumosus</i>	aster, bushy
<i>Aster umbellatus</i>	aster, flat-top white
<i>Axonopus spp.</i>	carpet grass
<i>Baccharis dioica</i>	false-willow, broom-bush
<i>Baccharis glomeruliflora</i>	groundsel tree
<i>Baccharis halimifolia</i>	false-willow, eastern
<i>Bidens pilosa</i>	beggar-ticks, hairy
<i>Bucida buceras</i>	gregory wood
<i>Bumelia celastrina</i>	bumelia, coastal
<i>Bumelia lycioides</i>	bumelia, buckthorn
<i>Bumelia reclinata</i>	bumelia
<i>Campanula americana</i>	bellflower, American

<i>Canna x</i>	garden canna
<i>generalis</i>	
<i>Carphephorus</i>	vanilla plant
<i>odoratissimus</i>	
<i>Carphephorus</i>	deer-tongue
<i>paniculatus</i>	
<i>Casuarina spp.</i>	casuarina
<i>Cayaponia</i>	cyaponia,
<i>guingueloba</i>	five-lobe
<i>Cestrum diurnum</i>	day jessamine
<i>Chasmanthium</i>	spangle grass
<i>latifolium</i>	
<i>Chasmanthium</i>	longleaf
<i>sessiliflorum</i>	Chasmanthium
<i>Chiococca spp.</i>	snowberry
<i>Colubrina</i>	snakewood,
<i>asiatica</i>	Asian
<i>Conoclinium</i>	mistflower
<i>coelestinum</i>	
<i>Coreopsis</i>	tickseed, tall
<i>tripteris</i>	
<i>Cupaniopsis</i>	carrotwood
<i>anacardioides</i>	
<i>Cuphea</i>	waxweed,
<i>carthagenensis</i>	Columbia
<i>Cyperus</i>	flatsedge,
<i>cuspidatus</i>	coastal-plain
<i>Cyperus</i>	flatsedge
<i>giganteus</i>	
<i>Cyperus</i>	flatsedge,
<i>globulosus</i>	baldwin
<i>Cyperus</i>	flatsedge, black
<i>huarmensis</i>	knotty-root
<i>Cyperus metzii</i>	flatsedge
<i>Cyperus</i>	flatsedge
<i>retrorsus</i>	
<i>Cyperus</i>	flatsedge, purple
<i>rotundus</i>	
<i>Cypselea</i>	panal
<i>humifusa</i>	
<i>Cyrilla</i>	cyrilla, swamp
<i>racemiflora</i>	
<i>Dichondra</i>	pony-foot
<i>caroliniensis</i>	
<i>Digitaria</i>	crabgrass, dwarf
<i>serotina</i>	
<i>Diospyros</i>	persimmon,
<i>virginiana</i>	common
<i>Drymaria</i>	West Indian

<i>cordata</i>	chickweed
<i>Elytraria</i>	scaly-stem,
<i>caroliniensis</i>	Carolina
<i>Eragrostis spp.</i>	lovegrass
<i>Erechites</i>	fireweed
<i>hieraciifolia</i>	
<i>Erigeron</i>	fleabane
<i>guercifolius</i>	
<i>Erithralis</i>	black torchwood
<i>fruticosa</i>	
<i>Eryngium</i>	coyote-thistle,
<i>bladwini</i>	Baldwin's
<i>Eupatorium spp.</i>	thoroughworts
except	
<i>E. leptophyllum</i>	thoroughwort, secund (OBL)
<i>E. leucolepis</i>	thoroughwort, white-bract (FACW)
<i>E. mikanioides</i>	thoroughwort, semaphore (FACW)
<i>E. perfoliatum</i>	boneset, common (FACW)
<i>Eustachys</i>	finger grass
<i>petracea</i>	
<i>Euthamia spp.</i>	bushy goldenrod
<i>Ficus aurea</i>	fig, Florida strangler
<i>Fimbristylis</i>	hurricane-grass
<i>spathacea</i>	
<i>Flaveria bidentis</i>	yellowtop
<i>Flaveria</i>	yellowtop
<i>trinervia</i>	
<i>Forestiera</i>	privet, Florida
<i>segregata</i>	
<i>Gaylussacia</i>	dwarf
<i>dumosa</i>	huckleberry
<i>Gaylussacia</i>	dangleberry
<i>frondosa</i>	
<i>Gratiola hispida</i>	hyssop, hispid
<i>Helenium</i>	sneezeweed,
<i>amarum</i>	pasture
<i>Helianthus</i>	sunflower,
<i>floridanus</i>	Florida
<i>Heliotropium</i>	heliotrope,
<i>curassavicum</i>	seaside
<i>Heliotropium</i>	heliotrope

<i>polyphyllum</i>	
<i>Hibiscus</i>	rosemallow, sea
<i>tiliaceus</i>	
<i>Hypericum</i>	St. Andrew's
<i>hypericoides</i>	cross
<i>Ilex opaca</i> var.	American holly
<i>opaca</i>	
<i>Ilex vomitoria</i>	yaupon holly
<i>Jacquinia</i>	Joewood
<i>keyensis</i>	
<i>Juncus tenuis</i>	rush, path
<i>Kosteletzkya</i>	mallow, coastal
<i>pentasperma</i>	
<i>Lachnanthes</i>	redroot
<i>caroliniana</i>	
<i>Leptochloa</i>	sprangle-top,
<i>virgata</i>	tropic
<i>Liatris gracilis</i>	blazing star
<i>Liatris spicata</i>	gayfeather,
	spiked
<i>Lilium catesbaei</i>	lily, southern red
<i>Lindernia</i>	false-pimpernel
<i>crustacea</i>	Malayan
<i>Linum</i>	flax, Florida
<i>floridanum</i>	yellow
<i>Linum medium</i>	flax, stiff yellow
<i>Lyonia ligustrina</i>	maleberry
<i>Manisuris</i>	joint grass, pitted
<i>cylindrica</i>	
<i>Maytenus</i>	Florida mayten
<i>phyllanthoides</i>	
<i>Melaleuca</i>	punk tree
<i>guinguenervia</i>	
<i>Melochia</i>	chocolate-weed
<i>corchorifolia</i>	
<i>Metopium</i>	poison wood
<i>toxiferum</i>	
<i>Mimosa pigra</i>	mimosa, black
<i>Morus rubra</i>	mulberry, red
<i>Muhlenbergia</i>	cutover muhly
<i>expansa</i>	
<i>Murdannia</i> spp.	dewflower
<i>Myosurus</i>	mouse-tail, tiny
<i>minimus</i>	
<i>Myrica cerifera</i>	bayberry,
	southern
<i>Myrsine</i>	myrsine, guiana
<i>guianensis</i>	
<i>Nephrolepis</i>	sword ferns

<i>spp.</i>	
<i>Neyraudia reynaudiana</i>	reed, silk
<i>Oplismenus setarius</i>	grass, woods
<i>Oryza sativa</i>	rice, cultivated
<i>Panicum anceps</i>	panicum, beaked
<i>Panicum commutatum</i> (Hall)	panicum
<i>Panicum hians</i>	panicum, gaping
<i>Panicum strigosum</i>	panicum
<i>Panicum tenue</i>	panicum
<i>Parietaria spp.</i>	pellitory
<i>Paspalum conjugatum</i>	paspalum, sour
<i>Paspalum dilatatum</i>	dallisgrass
<i>Paspalum fimbriatum</i>	paspalum, Panama
<i>Paspalum plicatulum</i>	paspalum, brown-seed
<i>Paspalum setaceum</i>	paspalum, thin
<i>Paspalum urvillei</i>	grass, vasey
<i>Pennisetum purpureum</i>	elephant ear grass
<i>Phalaris spp.</i>	grass, canary
<i>Phyla spp.</i>	frog-fruit
<i>Phyllanthus urinaria</i>	leaf-flower, water
<i>Piriqueta caroliniana</i>	piriqueta
<i>Polypogon spp.</i>	grass, rabbit-foot
<i>Polypremium procumbens</i>	rustweed
<i>Psidium cattleianum</i>	guava, strawberry
<i>Psychotria spp.</i>	wild coffee
<i>Rhodomyrtus tomentosus</i>	downy rose myrtle
<i>Rubus spp.</i>	blackberries
<i>Ruellia brittoniana</i>	wild-petunia, Britton's
<i>Ruellia caroliniensis</i>	wild petunia

<i>Sabal palmetto</i>	palm, cabbage
<i>Sacciolepis indica</i>	grass, glenwood
<i>Sambucus canadensis</i>	elderberry
<i>Sapium sebiferum</i>	tallow-tree, Chinese
<i>Schinus terebinthifolius</i>	pepper-tree, Brazilian
<i>Schizachyrium spp.</i>	bluestem
<i>Scoparia dulcis</i>	sweet broom
<i>Scutellaria floridana</i>	skullcap
<i>Scutellaria integrifolia</i>	rough skullcap
<i>Sebastiana fruticosa</i>	sebastian-bush, gulf
<i>Sesbania spp.</i>	rattle-bush
<i>Setaria geniculata</i>	grass, bristle
<i>Seymeria cassiodes</i>	black senna
<i>Solidago rugosa</i>	golden-rod, wrinkled
<i>Stillingia sylvatica</i>	queen's-delight, marsh
<i>var. tenuis</i>	
<i>Suriana maritima</i>	bay-cedar
<i>Syzygium spp.</i>	Java plum
<i>Thespesia populnea</i>	seaside mahoe
<i>Tradescantia fluminensis</i>	trailing spiderwort
<i>Trema spp.</i>	trema
<i>Tripsacum dactyloides</i>	grass, eastern gama
<i>Vaccinium elliotii</i>	blueberry, Elliott
<i>Verbesina virginica</i>	crownbeard, white
<i>Wedelia trilobata</i>	creeping ox-eye

Within Monroe County and the Key Largo portion of Miami-Dade County only, the following species shall be listed as Facultative:

<i>Alternanthera paronychioides</i>	smooth chaff-flower
<i>Byrsonima lucida</i>	locust-berry

<i>Ernodea littoralis</i>	golden creeper
<i>Guapira discolor</i>	blolly
<i>Manilkara bahamensis</i>	wild dilly
<i>Pisonia rotundata</i>	pisonia
<i>Pithecellobium keyensis</i>	blackbead
<i>Pithecellobium unguis-cati</i>	catsclaw
<i>Randia aculeata</i>	box briar
<i>Reynosa septentrionalis</i>	darling plum
<i>Thrinax radiata</i>	Florida thatch palm

(4) Nomenclature. Use of plants in this rule is based solely on the scientific names. Common names are included in the above lists for information purposes only. The following references shall be used by the regulating agency to resolve any uncertainty about the nomenclature or taxonomy of any plant listed by a given scientific name in this section: R. Godfrey, *Trees, Shrubs and Woody Vines of Northern Florida and Adjacent Georgia & Alabama* (Univ. Ga. Press, Athens 1988) and D. Lelling, *Ferns & Fern-Allies of the United States & Canada* (Smithsonian Institution Press, Washington D.C. 1985) for all species covered by these references. For all other listed scientific names the following references will be followed unless the species list in this section designates a different authority next to an individual species name: R. Godfrey & J. Wooten, *Aquatic and Wetland Plants of Southeastern United States: Monocotyledons* (Univ. Ga. Press, Athens 1979); R. Godfrey & J. Wooten, *Aquatic and Wetland Plants of Southeastern United States: Dicotyledons* (Univ. Ga. Press, Athens 1979); D. & H. Correll, *Flora of the Bahama Archipelago* (A.R. Gantner, Germany 1982). When the species list in this section designates a different authority next to an individual species name, the regulating agency shall resolve any ambiguity in nomenclature by using the name identified in D. Hall, *The Grasses of Florida* (Doctoral Dissertation, Univ. of Fla., Gainesville 1978); or C. Campbell, *Systematics of the Andropogon Virginicus Complex (GRAMINEAE)*, 64 *Journal of the Arnold Arboretum* 171-254 (1983).

Specific Authority 373.421 FS. Law Implemented 373.421, 373.4211 FS. History—New 7-1-94, Formerly 17-340.450.

62-340.500 Hydrologic Indicators.

The indicators below may be used as evidence of inundation or saturation when used as provided in Rule 62-340.300, F.A.C. Several of the indicators reflect a specific water elevation. These specific water elevation indicators are intended to be evaluated with meteorological information, surrounding topography and reliable hydrologic data or analyses when provided, to ensure that such indicators reflect inundation or saturation of a frequency and duration sufficient to meet the wetland definition in subsection 62-340.200(19), F.A.C., and not rare or aberrant events. These specific water elevation indicators are not intended to be extended from the site of the indicator into surrounding areas when reasonable scientific judgment indicates that the surrounding areas are not wetlands as defined in subsection 62-340.200(19), F.A.C.

(1) Algal mats. The presence or remains of nonvascular plant material which develops during periods of inundation and persists after the surface water has receded.

(2) Aquatic mosses or liverworts on trees or substrates. The presence of those species of mosses or liverworts tolerant of or dependent on surface water inundation.

(3) Aquatic plants. Defined in subsection 62-340.200(1), F.A.C.

(4) Aufwuchs. The presence or remains of the assemblage of sessile, attached or free-living, nonvascular plants and invertebrate animals (including protozoans) which develop a community on inundated surfaces.

(5) Drift lines and rafted debris. Vegetation, litter, and other natural or manmade material deposited in discrete lines or locations

on the ground or against fixed objects, or entangled above the ground within or on fixed objects in a form and manner which indicates that the material was waterborne. This indicator should be used with caution to ensure that the drift lines or rafted debris represent usual and recurring events typical of inundation or saturation at a frequency and duration sufficient to meet the wetland definition of subsection 62-340.200(19), F.A.C.

(6) Elevated lichen lines. A distinct line, typically on trees, formed by the water-induced limitation on the growth of lichens.

(7) Evidence of aquatic fauna. The presence or indications of the presence of animals which spend all or portions of their life cycle in water. Only those life stages which depend on being in or on water for daily survival are included in this indicator.

(8) Hydrologic data. Reports, measurements, or direct observation of inundation or saturation which support the presence of water to an extent consistent with the provisions of the definition of wetlands and the criteria within this rule, including evidence of a seasonal high water table at or above the surface according to methodologies set forth in *Soil and Water Relationships of Florida's Ecological Communities* (Florida Soil Conservation Staff 1992).

(9) Morphological plant adaptations. Specialized structures or tissues produced by certain plants in response to inundation or saturation which normally are not observed when the plant has not been subject to conditions of inundation or saturation.

(10) Secondary flow channels. Discrete and obvious natural pathways of water flow landward of the primary bank of a stream watercourse and typically parallel to the main channel.

(11) Sediment deposition. Mineral or organic matter deposited in or shifted to positions indicating water transport.

(12) Vegetated tussocks or hummocks. Areas where vegetation is elevated above the natural grade on a mound built up of plant debris, roots, and soils so that the growing vegetation is not subject to the prolonged effects of soil anoxia.

(13) Water marks. A distinct line created on fixed objects, including vegetation, by a sustained water elevation.

Specific Authority 373.421 FS. Law Implemented 373.421, 373.4211 FS. History—New 7-1-94, Formerly 17-340.500.

62-340.550 Wetland Hydrology.

A wetland delineation using the methodology described above, can be refuted by either reliable hydrologic records or site specific hydrologic data which indicate that neither inundation for at least seven consecutive days, nor saturation for at least twenty consecutive days, occurs during conditions which represent long-term hydrologic conditions. Hydrologic records or site specific hydrologic data must be of such a duration, frequency, and accuracy to demonstrate that the records or data are representative of the long-term hydrologic conditions, including the variability in quantity and seasonality of rainfall. When sufficient amounts of either reliable hydrologic records or site specific hydrologic data are not available to prove that the wetland area of concern does not inundate or saturate as described above, a site-specific field-verified analytic or numerical model may be used to demonstrate that the wetland area no longer inundates or saturates regularly or periodically under typical long-term hydrologic conditions. Before initiating the use of a model to evaluate if a wetland delineation should be refuted based on hydrologic conditions, the applicant or petitioner shall first meet with the appropriate regulating agency and reach an agreement on the terms of study, including data collection, the specific model, model development and calibration, and model verification. If the data, analyses, or models are deemed inadequate based on the hydrologic conditions being addressed, the regulating agency shall provide a case-by-case review of the applicability of any data, analyses, or models and shall provide specific reasons, based on generally accepted scientific and engineering practices, why they are inadequate.

Specific Authority 373.421 FS. Law Implemented 373.421, 373.4211 FS. History—New 7-1-94, Formerly 17-340.550.

62-340.600 Surface Waters.

(1) For the purposes of Section 373.421, F.S., surface waters are waters on the surface of the earth, contained in bounds created naturally or artificially, including, the Atlantic Ocean, the Gulf of Mexico, bays, bayous, sounds, estuaries, lagoons, lakes, ponds, impoundments, rivers, streams, springs, creeks, branches, sloughs, tributaries, and other watercourses. However, state water quality standards apply only to those waters defined in subsection 403.031(13), F.S.

(2) The landward extent of a surface water in the State for the purposes of implementing Section 373.414, F.S., shall be the more landward of the following:

(a) Wetlands as located by Rule 62-340.300, F.A.C., of this chapter;

- (b) The mean high water line elevation for tidal water bodies;
 - (c) The ordinary high water line for non-tidal natural water bodies;
 - (d) The top of the bank for artificial lakes, borrow pits, canals, ditches and other artificial water bodies with side slopes of 1 foot vertical to 4 feet horizontal or steeper, excluding spoil banks when the canals and ditches have resulted from excavation into the ground; or
 - (e) The seasonal high water line for artificial lakes, borrow pits, canals, ditches, and other artificial water bodies with side slopes flatter than 1 foot vertical to 4 feet horizontal along with any artificial water body created by diking or impoundment above the ground.
- (3) Determinations made pursuant to paragraphs (2)(b) and (2)(c) shall be for regulatory purposes and are not intended to be a delineation of the boundaries of lands for the purposes of title.

Specific Authority 373.421 FS. Law Implemented 373.421, 373.4211, 403.031(13) FS. History—New 7-1-94, Formerly 17-340.600.

62-340.700 Exemptions for Treatment or Disposal Systems.

(1) Alteration and maintenance of the following shall be exempt from the rules adopted by the department and the water management districts to implement subsections 373.414(1) through 373.414(6), 373.414(8) and 373.414(10), F.S.; and subsection 373.414(7), F.S., regarding any authority to apply state water quality standards within any works, impoundments, reservoirs, and other watercourses described in this subsection and any authority granted pursuant to Section 373.414, F.S. (1991):

(a) Works, impoundments, reservoirs, and other watercourses constructed and operated solely for wastewater treatment or disposal in accordance with a valid permit reviewed or issued under Rules 62-28.700, 62-302.520, F.A.C., Chapters 62-17, 62-600, 62-610, 62-640, 62-650, 62-660, 62-670, 62-671, 62-673, or 62-701, F.A.C., or Section 403.0885, F.S., or rules implementing Section 403.0885, F.S., except for treatment wetlands or receiving wetlands permitted to receive wastewater pursuant to Chapter 62-611, F.A.C., or Section 403.0885, F.S., or its implementing rules;

(b) Works, impoundments, reservoirs, and other watercourses constructed solely for wastewater treatment or disposal before a construction permit was required under Chapter 403, F.S., and operated solely for wastewater treatment or disposal in accordance with a valid permit reviewed or issued under Rules 62-28.700, 62-302.520, F.A.C., Chapters 62-17, 62-600, 62-610, 62-640, 62-650, 62-660, 62-670, 62-671, 62-673, or 62-701, F.A.C., or Section 403.0885, F.S., or rules implementing Section 403.0885, F.S., except for treatment wetlands or receiving wetlands permitted to receive wastewater pursuant to Chapter 62-611, F.A.C., or Section 403.0885, F.S., or its implementing rules;

(c) Works, impoundments, reservoirs, and other watercourses of less than 0.5 acres in combined area on a project-wide basis, constructed and operated solely for stormwater treatment in accordance with a noticed exemption under Chapter 62-25, F.A.C., or a valid permit issued under Chapters 62-25 (excluding Rule 62-25.042), 62-330, 40B-4, 40C-4, 40C-42 (excluding Rule 40C-42.0265), 40C-44, 40D-4, 40D-40, 40D-45, or 40E-4, F.A.C., except those permitted as wetland stormwater treatment systems; or

(d) Works, impoundments, reservoirs, and other watercourses of less than 0.5 acres in combined area on a project-wide basis, constructed and operated solely for stormwater treatment before a permit was required under Chapters 62-25, 40B-4, 40C-4, 40C-42, 40C-44, 40D-4, 40D-40, 40D-45, or 40E-4, F.A.C.

(2) Alteration and maintenance of the following shall be exempt from the rules adopted by the department and the water management districts to implement subsections 373.414(1), 373.414(2)(a), 373.414(8), and 373.414(10), F.S.; and subsections 373.414(3) through 373.414(6), F.S.; and subsection 373.414(7), F.S., regarding any authority to apply state water quality standards within any works, impoundments, reservoirs, and other watercourses described in this subsection and any authority granted pursuant to Section 373.414, F.S. (1991), except for authority to protect threatened and endangered species in isolated wetlands:

(a) Works, impoundments, reservoirs, and other watercourses of 0.5 acre or greater in combined area on a project-wide basis, constructed and operated solely for stormwater treatment in accordance with a noticed exemption under Chapter 62-25, F.A.C., or a valid permit issued under Chapters 62-25 (excluding Rule 62-25.042), 62-330, 40B-4, 40C-4, 40C-42 (excluding Rule 40C-42.0265), 40C-44, 40D-4, 40D-40, 40D-45, 40E-4, except those permitted as wetland stormwater treatment systems; or

(b) Works, impoundments, reservoirs, and other watercourses of 0.5 acres or greater in combined area on a project-wide basis, constructed and operated solely for stormwater treatment before a permit was required under Chapters 62-25, 40B-4, 40C-4, 40C-42, 40C-44, 40D-4, 40D-40, 40D-45, or 40E-4, F.A.C.

(3) The exemptions in subsections 62-340.700(1) and (2) shall not apply to works, impoundments, reservoirs or other

watercourses that

(a) Are currently wetlands which existed before construction of the stormwater treatment system and were incorporated in it;
(b) Are proposed to be altered through expansion into wetlands or other surface waters; or
(c) Are wetlands created, enhanced, or restored as mitigation for wetland or surface water impacts under a permit issued by the Department or a water management district.

(4) Alterations and maintenance of works, impoundments, reservoirs, and other watercourses exempt under this subsection shall not be considered in determining whether any wetland permitting threshold is met or exceeded under part IV of Chapter 373, F.S.

(5) Works, impoundments, reservoirs, and other watercourses exempt under this subsection, other than isolated wetlands in systems described in subsection 62-340.700(2), F.A.C., above, shall not be delineated under Section 373.421, F.S.

(6) This exemption shall not affect the application of state water quality standards, including those applicable to Outstanding Florida Waters, at the point of discharge to waters as defined in subsection 403.031(13), F.S.

(7) As used in this subsection, “solely for” means the reason for which a work, impoundment, reservoir, or other watercourse is constructed and operated; and such construction and operation would not have occurred but for the purposes identified in subsection 62-340.700(1) or 62-340.700(2), F.A.C. Furthermore, the phrase does not refer to a work, impoundment, reservoir, or other watercourse constructed or operated for multiple purposes. Incidental uses, such as occasional recreational uses, will not render the exemption inapplicable, so long as the incidental uses are not part of the original planned purpose of the work, impoundment, reservoir, or other watercourse. However, for those works, impoundments, reservoirs, or other watercourses described in paragraphs 62-340.700(1)(c) and 62-340.700(2)(a), F.A.C., use of the system for flood attenuation, whether originally planned or unplanned, shall be considered an incidental use, so long as the works, impoundments, reservoirs, and other watercourses are no more than 2 acres larger than the minimum area required to comply with the stormwater treatment requirements of the district or department. For the purposes of this subsection, reuse from a work, impoundment, reservoir, or other watercourse is part of treatment or disposal.

Specific Authority 373.414(9) FS. Law Implemented 373.414(9) FS. History—New 7-1-94, Formerly 17-340.700.

62-340.750 Exemption for Surface Waters or Wetlands Created by Mosquito Control Activities.

Construction, alteration, operation, maintenance, removal, and abandonment of stormwater management systems, dams, impoundments, reservoirs, appurtenant works, or works, in, on or over lands that have become surface waters or wetlands solely because of mosquito control activities undertaken as part of a governmental mosquito control program, and which lands were neither surface waters nor wetlands before such activities, shall be exempt from the rules adopted by the department and water management districts to implement subsections 373.414(1) through 373.414(6), 373.414(8), and 373.414(10), F.S.; and subsection 373.414(7), F.S., regarding any authority granted pursuant to Section 373.414, F.S. (1991). Activities exempted under this section shall not be considered in determining whether any wetland permitting threshold is met or exceeded under part IV of Chapter 373, F.S. This exemption shall not affect the regulation of impacts on other surface waters or wetlands, or the application of state water quality standards to waters as defined in subsection 403.031(13), F.S., including standards applicable to Outstanding Florida Waters.

Specific Authority 373.414(9) FS. Law Implemented 373.414(9) FS. History—New 7-1-94, Formerly 17-340.750.