Appendix B. Wetland and Soil Types in the Floodplain of the St. Johns River, Florida

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Table B-1. Wetland Types of the St. Johns River Basin

Wetland Type	Description
Freshwater Wetlands	
Cypress (CY)	Forested wetlands dominated by bald cypress or pond cypress (*Taxodium distichum* or *T. ascendens*) and flooded annually for periods of long duration - typically 4 to 8 months in any given year. Includes cypress dome, stand, and lakeshore variants.
Hardwood Swamp (HS)	Forested wetlands dominated by one or more deciduous hardwood species typically including black gum, red maple, water ash, water elm, and willows. Cypress is often a significant component of this type. Subject to annual, seasonal periods of prolonged flooding.
Bayhead (BH)	Forested wetlands dominated by one or more species of broadleaved, evergreen bay trees (*Gordonia lasianthus*, *Persea palustris*, or *Magnolia virginica*). Dahoon holly (*Ilex cassine*) may occasionally be dominant. Soils usually organic and nearly constantly saturated as well as being at least occasionally flooded. The canopy of some sites may be dominated by pines, but bays and other indicators will be prevalent in the subcanopy and understory.
Baygall (BG)	Forested wetlands typically dominated by one or more species of evergreen bay trees or less commonly by dahoon holly, deciduous hardwoods, or pine. Located at the bases of sandy slopes and maintained by downslope seepage. Soils organic and nearly constantly saturated but infrequently flooded.
Hydric Hammock (HH)	Forested systems dominated by a mixture of broadleaved evergreen and deciduous tree species. Cabbage palmetto (CP) may be dominant in some variants of this type. Seldom inundated but with saturated soils during much of the year.
Bottomland Hardwoods (BL)	Deciduous forest communities lying in the floodplains of rivers and streams subject to rapid rise and fall of floodwaters. At other times, they may be relatively well drained, or at most, saturated by lateral seepage. Associated soils are alluvial.

Wetland Type	Description
Forested Depressions (FD)	Typically pond cypress, pine, deciduous hardwood, bay, or cabbage palm dominated communities occupying shallow depressions in mesic flatwoods sites. Understory vegetation consists of hydrophytic shrubs, grasses, and herbs. Saw palmetto, gallberry and other typical mesic flatwoods species generally absent. In the absence of fires, or as a result of forest management practices, understory or associated species (such as loblolly bay) may dominate these sites. Soils usually sandy and subject to brief (1 - 2 months) seasonal inundation or prolonged soil saturation.
Shrub Swamp (SS)	Dominated by willows, buttonbush, or similar appearing vegetation. Hydrology similar to that of cypress, hardwood swamp, or shallow marsh communities.
Shrub Bog (SB)	Dominated by shrubby vegetation occupying typical bayhead sites. Often developing in bayheads destroyed by fire or other disturbance. Hydrology similar to that of bayhead communities.
Shrubgall (SG)	Wetlands dominated by shrubby vegetation occupying typical baygall sites and having similar hydrologies and soils.
Transitional Shrub (TS)	Dominated by transitional shrubby vegetation at upland margins of wetter community types or on clear cut hydric sites. Also develops on wet prairie sites which have been protected from fire. Wax myrtle (*Myrica cerifera*) and *Baccharis halimnifolia* are typical species.
Deep Marsh (DM)	Deep water wetlands dominated by a mixture of water lilies and deep water emergent species. Semi-permanently to permanently flooded.
Lakeshore Emergents (DM-LS)	Emergent vegetation growing along lake shores and usuall y semi-permanently flooded. *Panicum hemitomon* and species of *Scirpus* are most common.
Water Lilies (DM-N)	Floating leaved species in the genera *Nymphaea, Nuphar, Nelumbo, Brasenia and Nymphoides*. Usually semi-permanently to permanently flooded.
Shallow Marsh (SM)	Herbaceous or graminoid communities dominated by species such as sawgrass, maidencane, cattails, pickerel weed, arrowhead, or other grasses and broad leaved herbs. Occurs most often on organic soils that are subject to lengthy seasonal inundation. Subject to occasional fire.
Wet Prairie (WP)	Communities of grasses, sedges, rushes, and herbs typically dominated by sand cordgrass, maidencane, or a mixture of species. Usually on mineral soils that are inundated for a relatively short duration each year, but with prolonged soil saturation. Subject to frequent fire.
Floating Marshes (FF)	Communities of free-floating plants (such as water hyacinth, water lettuce, or duckweed) or floating mats of rhizomatous species (such as alligator weed or various grasses and sedges).

Wetland Type	Description
Submerged Aquatic Beds (AB)	Communities of aquatic plants rooted in the sediments of shallow water bodies and having the majority of their photosynthetic tissues below the water surface. Generally permanently flooded.
Freshwater Flats and Barren Areas (BA)	Sandy or muddy sites subject to occasional or regular inundation with less than 33% vegetation cover during the growing season.
Water (W)	Unvegetated or sparsely vegetated sites subject to prolonged or semi-permanent flooding. Includes lakes, streams, ponds and other water bodies.
Saline Wetlands	
Mangrove Forest (MF)	Forested saline wetlands dominated by one or more mangrove tree species (*Rhizophora mangle*, *Avicennia germinans*, or *Laguncularia racemosa*) growing on sites where they are capable of achieving tree stature. These communities may be further classified by dominant species or by forest physiognomy.
Shrub Mangrove (MS)	Sites dominated by one or more mangrove tree species growing on sites where they are prevented by natural processes (including climate, nutrients, and wave action) from achieving tree size. These communities may be further classified according to dominant tree species or by stand physiognomy.
Spartina alterniflora Marsh (SA)	Herbaceous saline wetlands dominated by smooth cordgrass, often in nearly pure stands. Typically occupies a zone between open water or tidal flat communities and a salt flat or black needle rush zone.
Juncus roemerianus Marsh (JR)	Herbaceous saline wetlands dominated by black needlerush, often in nearly pure stands. Typically occupies a zone between the lower smooth cordgrass zone and the high meadow community type.
Salt Flats (SF)	Communities developing on sandy, hypersaline soils upland from the *Spartina* or *Juncus* zone and which are characterized by concentric bands of vegetation developing in response to a salinity gradient. Consists of salt barrens (SF-B) and vegetated flats (SF-V).
Borrichia frutescens (BO)	Saline wetlands dominated by sea ox-eye. Most abundant in marshes of high salinity and low tidal amplitude and at higher elevations adjacent to high meadow communities.
High Meadow (HM)	High irregularly flooded herbaceous communities transitional between uplands and salt flats or Juncus roemerianus marshes and typically dominated by *Spartina bakeri, S. patens, Borrichia frutescens,* or other facultative species.
Tidal Flats (TF)	Non-vegetated, shallow-water habitats situated between the low and high tide limits. Substrate soft to semi- soft sand or mud. Found where sediments accumulate and usually bordered landward by Sparti na alterniflora marshes and seaward by tidal channels or subtidal seagrass beds.

Wetland Type	Description
Shoreline and Beach (BE)	Non-vegetated sites occupying slopes exposed to periodic inundation, and wave action. Typically bordering open water areas and transitional to upland coastal dunes and scrub communities.
Seagrass Beds (SG)	Submerged beds of marine vascular plants dominated by *Halodule beaudettei*, *Ruppia maritima*, *Thalassia testudinum* or other species occurring below the intertidal zone.
Transitional Wetlands	
Intermediate Marsh (IM)	Herbaceous wetlands of low or fluctuating salinity in which neither estuarine or freshwater species attain full dominance. Subject to significant freshwater inflows as well as to daily tides and saltwater influence.
Uplands (U)	Used for all areas that are not delineated as wetlands vegetation. May include drained areas, developed or farmed lands, and pine plantations on hydric soils. Hydrology may be xeric, mesic, or hydric.

Table B-2. Soils of the St. Johns River Floodplain (SJRWMD, 2007 and Soil Survey Staff, 2011).

Soil Name	Series taxonomic Class	Soil Order	Series Drainage and Permeability	Permeability	O horizon thickness (in.) USDA	Average O horizon thickness (in.) MFL transects
Anclote muck	Siliceous, Hyperthermic Typic Endoaquolls	Mollisol	Very poorly drained	Rapid permeability	<5	9
Anclote	Siliceous, Hyperthermic Typic Endoaquolls	Mollisol	Very poorly drained	Rapid permeability	0	4.45
Basinger fine sand	Siliceous, Hyperthermic Spodic Psammaquents	Entisol	Poorly and very poorly drained	Rapid permeability	0	—
Basinger	Siliceous, Hyperthermic Spodic Psammaquents	Entisol	Poorly and very poorly drained	Rapid permeability	0	0.5
Bluff	Fine-Loamy, Siliceous, Superactive, Hyperthermic Typic Endoaquolls	Mollisol	Very poorly drained	Slow permeability	0	1.93
Bradenton fine sand	Coarse-Loamy, Siliceous, Superactive, Hyperthermic Typic Endoaqualfs	Alfisol	Poorly drained	Moderate to slow permeability	0	—

Soil Name	Series taxonomic Class	Soil Order	Series Drainage and Permeability	Permeability	O horizon thickness (in.) USDA	Average O horizon thickness (in.) MFL transects
Bradenton	Coarse-Loamy, Siliceous, Superactive, Hyperthermic Typic Endoaqualfs	Alfisol	Poorly drained	Moderate to slow permeability	0	4
Canova muck	Fine-loamy, siliceous, superactive, hyperthermic Histic Glossaqualfs	Alfisol	Very poorly drained	Moderate to slow permeability	9	9.71
Chobee fine sandy loam	Fine-loamy, siliceous, superactive, hyperthermic Typic Argiaquolls	Mollisol	Very poorly drained	Slow to very slow permeability	0	—
Chobee loamy fine sand	Fine-loamy, siliceous, superactive, hyperthermic Typic Argiaquolls	Mollisol	Very poorly drained	Slow to very slow permeability	0	—
Chobee	Fine-loamy, siliceous, superactive, hyperthermic Typic Argiaquolls	Mollisol	Very poorly drained	Slow to very slow permeability	0	7.56
Delray fine sand	Loamy, siliceous, superactive, hyperthermic Grossarenic Argiaquolls	Mollisol	Very poorly drained	Rapid permeability in the A and Eg horizons and moderately rapid to moderate permeability in the Btg horizon	0	—
Delray	Loamy, siliceous, superactive, hyperthermic Grossarenic Argiaquolls	Mollisol	Very poorly drained	Rapid permeability in the A and Eg horizons and moderately rapid to moderate permeability in the Btg horizon	0	1.25
Denaud muck	Coarse-Loamy, Siliceous, Superactive, Nonacid, Hyperthermic Histic Humaquepts	Inceptisol	Very poorly drained	Moderate permeability	11	11
Denaud	Coarse-Loamy, Siliceous, Superactive, Nonacid, Hyperthermic Histic Humaquepts	Inceptisol	Very poorly drained	Moderate permeability	11	9.88
Eaton loamy sand	Clayey, mixed, active, hyperthermic Arenic Albaqualfs	Alfisol	Poorly and very poorly drained	Rapid permeability in the A horizon and slow in the Btg horizon	0	—
Eaton sand	Clayey, mixed, active, hyperthermic Arenic Albaqualfs	Alfisol	Poorly and very poorly drained	Rapid permeability in the A horizon and slow in the Btg horizon	0	8

Soil Name	Series taxonomic Class	Soil Order	Series Drainage and Permeability	Permeability	O horizon thickness (in.) USDA	Average O horizon thickness (in.) MFL transects
Eaton	Clayey, mixed, active, hyperthermic Arenic Albaqualfs	Alfisol	Poorly and very poorly drained	Rapid permeability in the A horizon and slow in the Btg horizon	0	2.51
Everglades	Euic, Hyperthermic Typic Haplohemists	Histisol	very poorly drained	rapid to very rapid	80	—
EauGallie	Sandy, siliceous, hyperthermic Alfic Alaquods	Spodosol	Poorly or very poorly drained	Moderate to slow permeability	0	—
Farmton	Sandy, siliceous hyperthermic Arenic Ultic	Spodosol	Poorly drained	Rapid permeability in the A and E horizons and moderately slow permeability in the Btg horizons.	0	—
Felda sand	Loamy, siliceous, superactive, hyperthermic Arenic Endoaqualfs	Alfisol	Poorly drained and very poorly drained	Moderately rapid to moderate permeability	0	—
Felda	Loamy, siliceous, superactive, hyperthermic Arenic Endoaqualfs	Alfisol	Poorly drained and very poorly drained	Moderately rapid to moderate permeability	0	—
Floridana sand	Loamy, siliceous, superactive, hyperthermic Arenic Argiaquolls	Mollisol	Very poorly drained	Very slow permeability	0	4.25
Floridana	Loamy, siliceous, superactive, hyperthermic Arenic Argiaquolls	Mollisol	Very poorly drained	Very slow permeability	0	3.58
Gator muck	Loamy, siliceous, euic, hyperthermic Terric Haplosaprists	Histosol	Very poorly drained	Permeability is rapid in the Oa and moderate in the loamy parts of the Cg horizon	34	27.12
Gator	Loamy, siliceous, euic, hyperthermic Terric Haplosaprists	Histosol	Very poorly drained	Permeability is rapid in the Oa and moderate in the loamy parts of the Cg horizon	34	37.26
Holopaw sand	Loamy, siliceous, active, hyperthermic Grossarenic Endoaqualfs	Alfisol	Poorly and very poorly drained	Rapidly permeable in the A and E horizons and moderately or moderately slowly permeable in the B horizon	0	—
Holopaw	Loamy, siliceous, active, hyperthermic Grossarenic Endoaqualfs	Alfisol	Poorly and very poorly drained	Rapidly permeable in the A and E horizons and moderately or moderately slowly permeable in the B horizon	0	1.3

Soil Name	Series taxonomic Class	Soil Order	Series Drainage and Permeability	Permeability	O horizon thickness (in.) USDA	Average O horizon thickness (in.) MFL transects
Hontoon	Dysic, Hyperthermic typic Haplosaprists	Histosols	Very poorly drained	Rapid permeability	65	—
Immokalee sand	Sandy, siliceous, hyperthermic Arenic Alaquods	Spodosol	Poorly drained or very poorly drained	Permeability is rapid or very rapid in the A and E horizons and moderate or moderately rapid in the Bh horizon	0	—
Immokalee	Sandy, siliceous, hyperthermic Arenic Alaquods	Spodosol	Poorly drained or very poorly drained	Permeability is rapid or very rapid in the A and E horizons and moderate or moderately rapid in the Bh horizon	0	1.25
Lynne sand	Sandy over clayey, siliceous over kaolinitic, hyperthermic Ultic Alaquods	Spodosol	Poorly drained	Moderately slow permeability	0	—
Lynne	Sandy over clayey, siliceous over kaolinitic, hyperthermic Ultic Alaquods	Spodosol	Poorly drained	Moderately slow permeability	0	5
Malabar	Loamy, siliceous, active, hyperthermic Grossarenic Endoaqualfs	Alfisols	Very poorly drained	Rapidly permeability in the A, E, Bw and Cg, horizons, slow to very slow permeability in the Btg horizon	0	—
Manatee loamy fine sand	Coarse-loamy, siliceous, superactive, hyperthermic Typic Argiaquolls	Mollisol	Very poorly drained	Moderate permeability	0	4
Manatee sandy loam	Coarse-loamy, siliceous, superactive, hyperthermic Typic Argiaquolls	Mollisol	Very poorly drained	Moderate permeability	0	5
Manatee sand	Coarse-loamy, siliceous, superactive, hyperthermic Typic Argiaquolls	Mollisol	Very poorly drained	Moderate permeability	0	2
Manatee	Coarse-loamy, siliceous, superactive, hyperthermic Typic Argiaquolls	Mollisol	Very poorly drained	Moderate permeability	0	3.22
Maurepas Muck	euic hyperthermic tykpic haplosaprists	Histosol	Very poorly drained	rapid	64	—

Soil Name	Series taxonomic Class	Soil Order	Series Drainage and Permeability	Permeability	O horizon thickness (in.) USDA	Average O horizon thickness (in.) MFL transects
Myakka sand	Sandy, siliceous, hyperthermic Aeric Alaquods	Spodosol	Poorly to very poorly drained	Rapid permeability in the A horizon and moderate or moderately rapid permeability in the Bh horizon	0	—
Micco	Loamy, siliceous, dysic, hyperthermic Terric Haplohemists	Histosol	Very poorly drained	Permeability is moderate to moderately slow	30	—
Myakka	Sandy, siliceous, hyperthermic Aeric Alaquods	Spodosol	Poorly to very poorly drained	Rapid permeability in the A horizon and moderate or moderately rapid permeability in the Bh horizon	0	1
Nittaw	Fine, smectitic, hyperthermic Typic Argiaquolls	Mollisol	Very poorly drained	Permeability is rapid in the Oa and A horizon and slow in the B2tg horizon	7	7.5
Ona fine sand	Sandy, siliceous, hyperthermic Typic Alaquods	Spodosol	Poorly drained	Permeability of the Bh horizon is moderate	0	—
Ona	Sandy, siliceous, hyperthermic Typic Alaquods	Spodosol	Poorly drained	Permeability of the Bh horizon is moderate	0	14
Paisley	Fine, smectitic, hyperthermic Typic Albaqualfs	Alfisol	Poorly drained	Slow permeability	0	—
Pineda sand	Loamy, siliceous, active, hyperthermic Arenic Glossaqualfs	Alfisol	Poorly or very poorly drained	Very slow permeability	0	—
Pinellas	Loamy, siliceous, superactive, hyperthermic Arenic Endoqualfs	Alfisol	Poorly drained	Moderately rapid to rapid permeability	0	—
Placid sand	Sandy, siliceous, hyperthermic Typic Humaquepts	Inceptisol	Very poorly drained	Rapid permeability	0	—
Pomello	Sandy, siliceous, hyperthermic Oxyaquic Alorthods	Spodosol	Moderately well and somewhat poorly drained	Moderately rapid permeability	0	—
Pomona sand	Sandy, siliceous, hyperthermic Ultic Alaquods	Spodosol	Poorly or very poorly drained	Rapid to moderate permeability in the A and E horizons and moderately slow to moderate permeability in the Bt and Btg horizons	0	—

Soil Name	Series taxonomic Class	Soil Order	Series Drainage and Permeability	Permeability	O horizon thickness (in.) USDA	Average O horizon thickness (in.) MFL transects
Pomona	Sandy, siliceous, hyperthermic Ultic Alaquods	Spodosol	Poorly or very poorly drained	Rapid to moderate permeability in the A and E horizons and moderately slow to moderate permeability in the Bt and Btg horizons	0	1
Pompano fine sand	Siliceous, hyperthermic Typic Psammaquents	Entisol	Very poorly drained	Rapid or very rapid permeability	0	7
Pompano	Siliceous, hyperthermic Typic Psammaquents	Entisol	Very poorly drained	Rapid or very rapid permeability	0	2.33
Riviera sand	Loamy, siliceous, active, hyperthermic Arenic Glossaqualfs	Alfisol	Poorly and very poorly drained	Very slow permeability	0	5
Riviera	Loamy, siliceous, active, hyperthermic Arenic Glossaqualfs	Alfisol	Poorly and very poorly drained	Very slow permeability	0	5
St. Johns sand	Sandy, siliceous, hyperthermic Typic Alaquods	Spodosol	Poorly or very poorly drained	Moderate permeability	0	2
Samsula muck	Sandy or sandy-skeletal, siliceous, dysic, hyperthermic Terric Haplosaprists	Histosol	Very poorly drained	Permeability is rapid	36	26.83
Sanibel muck	Sandy, siliceous, hyperthermic Histic Humaquepts	Inceptisol	Very poorly drained	Permeability is rapid	9	10.44
Sanibel sand	Sandy, siliceous, hyperthermic Histic Humaquepts	Inceptisol	Very poorly drained	Permeability is rapid	9	4.66
Sanibel	Sandy, siliceous, hyperthermic Histic Humaquepts	Inceptisol	Very poorly drained	Permeability is rapid	9	10.4
Scoggin sand	Loamy, siliceous, subactive, hyperthermic Arenic Endoaquults	Ultisol	Very poorly drained	Permeability is rapid in the A horizons and moderate in the Bt horizon	0-4	4
Scoggin	Loamy, siliceous, subactive, hyperthermic Arenic Endoaquults	Ultisol	Very poorly drained	Permeability is rapid in the A horizons and moderate in the Bt horizon	0-4	—
St. Lucie	Hyperthermic uncoated Typic Quartzipsamments	Entisols	Excessively drained	Very rapid permeability	0	—

Soil Name	Series taxonomic Class	Soil Order	Series Drainage and Permeability	Permeability	O horizon thickness (in.) USDA	Average O horizon thickness (in.) MFL transects
Tequesta muck	Coarse-loamy, siliceous, active, hyperthermic Histic Glossaqualfs	Alfisol	Very poorly drained	Rapid permeability in the A and E horizons and moderately slow permeability in the Btg horizons.	12	19.31
Tequesta	Coarse-loamy, siliceous, active, hyperthermic Histic Glossaqualfs	Alfisol	Very poorly drained	Rapid permeability in the A and E horizons and moderately slow permeability in the Btg horizons.	12	10
Terra Ceia muck	Euic, hyperthermic Typic Haplosaprists	Histosol	Very poorly drained	Permeability are rapid	65	46.12
Terra Ceia	Euic, hyperthermic Typic Haplosaprists	Histosol	Very poorly drained	Permeability are rapid	65	54.04
Tisonia	Clayey smectitic euic thermic terric sulfihemists	Histosol	Very poorly drained	slow	18	—
Tomoka muck	Loamy, siliceous, dysic, hyperthermic Terric Haplosaprists	Histosol	Very poorly drained	Moderately permeable	27	11.66
Tuscawilla fine sand	Fine-loamy, siliceous, superactive, hyperthermic Typic Endoaqualfs	Alfisol	Very poorly drained	Moderate permeability	0	—
Tuscawilla	Fine-loamy, siliceous, superactive, hyperthermic Typic Endoaqualfs	Alfisol	Very poorly drained	Moderate permeability	0	3.75
Valkaria	Siliceous, hyperthermic Spodic Psammaquents	Entisol	Poorly or very poorly drained	Rapid permeability	0	—
Wabasso fine sand	Sandy over loamy, siliceous, active, hyperthermic Alfic Alaquods	Spodosol	Poorly and very poorly drained	Rapidly permeable in the A and E horizons and slowly to very slowly permeable in the Bh and Bt horizons	0	—
Wabasso	Sandy over loamy, siliceous, active, hyperthermic Alfic Alaquods	Spodosol	Poorly and very poorly drained	Rapidly permeable in the A and E horizons and slowly to very slowly permeable in the Bh and Bt horizons	0	1.7
Winder loamy sand	Fine-loamy, siliceous, superactive, hyperthermic Typic Glossaqualfs	Alfisol	Poorly drained	Slow to very slow permeability	0	2

Table B-3. Conversion of Constraint Wetland Types (SJRWMD and CH2MHill, 1998) to SJRWMD Landcover/ landuse (SJRWMD, 2011) and District Wetland Vegetation Map (SJRWMD, 2002) Types.

SJRWMD Wetland Veg.	SJRWMD Landcover/use 2004	Constraints Wetlands	Drawdown Constraint (ft.)
Cypress (CY)	6210 Cypress	Cypress Swamp	0.55
Hardwood swamp	6170 Mixed wetland hardwoods	River/Lake Swamp / Mixed Forest	0.35
Bayhead (BH)	6110 Bay swamps	Bay Swamp	0.35
Baygall (BG)/	6110 Bay swamps	Bay Swamp	0.35
Hydric hammock (HH)	6170 Mixed wetland hardwoods / 6181 Cabbage Palm Hammock	Mixed Forest	0.35
Bottomland hardwoods (BL)	6170 Mixed wetland hardwoods	River/Lake Swamp / Mixed Forest	0.35
Forested depressions (FD)	6170 Mixed wetland hardwoods / Cabbage palm savannah / Pond pine / Hydric pine flatwoods	Mixed Forest	0.35
Shrub swamp (SS)	6460 Mixed scrub-shrub	Mixed Scrub-Shrub	0.75
Shrub bog(SB)	6460 Mixed scrub-shrub	Bay Swamp	0.35
Shrub gall (SG)	6460 Mixed scrub-shrub	Bay Swamp	0.35
Transitional scrub (TS)	6460 Mixed scrub-shrub	Mixed Scrub-Shrub	0.75
Deep Marsh (DM)	6440 Emergent aquatic vegetation	Emergent Aquatic Vegetation	0.85
Shallow Marsh (SM)	6410 Freshwater marshes	Freshwater Marsh	0.55
Wet Prairie (WP)	6430 Wet prairies	Wet Prairie	0.35
Floating Marshes (FF)	6440 Emergent aquatic vegetation	Emergent Aquatic Vegetation	0.85
Submerged Aquatic Beds (AB)		Submergent Aquatic	1.20
Freshwater flats and Barren Areas (BA)	6500 non-vegetated wetland	Non-Vegetated Wetland	1.20
Saline Wetlands (all kinds)	6420 Saltwater marshes / 6120 Mangrove Swamp	Saltwater marsh	Not used

Table B-4. Minimum Flows and Levels Determinations

Name	Minimum frequent high ft NGVD	Minimum average	Minimum frequent low	Minimum Infrequent low
Blue Cypress Water Management Area		24 (At or above this level at least 75% of time over the long term)	23 (Not at or below this level more often than once every 2.5 years over the long term)	22.5 (Not at or below this level for 60 continuous days more frequently than once every 10 years over the long term)
Lake Washington (Hall and Borah 1998) (river mile 258.8)	15.6	14.2	12.8	
SJR 1.5 miles downstream of L. Washington weir (river mile 253.1) (Hall and Borah 1998)	15.3	12.7	11.3	
Lake Poinsett (Mace 2007a)	13.7 Duration 30 days Return interval 2 years	11.3 Duration 180 days Return interval 1.5 years	9.9 Duration 120 days Return interval 5 years	
St. Johns River at SR 50 (Mace 2007b)	8.1 Duration 30 days Return interval 2 years	5.9 Duration 180 days Return interval 1.5 years	4.2 Duration 120 days Return interval 5 years	2.7 Duration 60 days Return interval 50 years
St. Johns River at Lake Monroe (Mace 2006b)	2.8 Duration 30 days Return interval 2 years	1.2 Duration 180 days Return interval 1.5 years	0.5 Duration 120 days Return interval 5 years	
SJR at SR 44 near DeLand (Mace 2006a)	1.9 Duration ≥ 30 days Return interval ≤3years	0.8 Duration ≤180 days ≥1.5 years	0.3 ≤120 days ≥5 years	

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