

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name OUC- Osceola to Cane Island Tap		Application Number		Assessment Area Name or Number Wetlands 198-B, 198-C, 199-A, 206-B, 213-B	
FLUCCs code 511 - Ditches		Further classification (optional)		Impact or Mitigation Site? Impact	Assessment Area Size 0.74 acres
Basin/Watershed Name/Number	Affected Waterbody (Class) III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) none		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands The ditches are isolated and are located along highway ROWs. They do not appear to connect with other wetlands in the ROW.					
Assessment area description There are three ditched areas occurring along the transmission corridor; none had water at the time of the site visit. They are vegetated with a mixture of species such as bahiagrass (<i>Paspalum notatum</i>), alexandergrass (<i>Brachiaria plantaginea</i>), nutrushes (<i>Scleria</i> spp.), and torpedo grass (<i>Panicum repens</i>).					
Significant nearby features highways, transmission lines			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique		
Functions drainage			Mitigation for previous permit/other historic use N/A		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Wading birds, deer, and feral hogs			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Occasional use by wading birds such as white ibis (<i>Eudocimus albus</i>) (SSC), wood stork (<i>Mycteria americana</i>) (E), and little blue heron (<i>Egretta caerulea</i>) (SSC).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Nine-banded armadillo (<i>Dasypus novemcinctus</i>) burrows were observed at the time of the site visit.					
Additional relevant factors:					
Assessment conducted by: M. Arrants			Assessment date(s): December-07		

PART II A – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name OUC- Osceola to Cane Island Tap	Application Number	Assessment Area Name or Number Wetlands 198-B, 198-C, 199-A, 206-B, 213-B (FLUCFCS 511)
Impact or Mitigation Existing Condition	Assessment conducted by: M. Arrants	Assessment date: Dec-07

Scoring Guidance The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Optimal (10) Condition is optimal and fully supports wetland/surface water functions	Moderate(7) Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal (4) Minimal level of support of wetland/surface water functions	Not Present (0) Condition is insufficient to provide wetland/surface water functions
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.500(6)(a) Location and Landscape Support w/o pres or current 4 with 0	Location and landscape support variable is decreased due to proximity of highways and transmission line ROW. Please see the following page for the individual parameter scores.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current 5 with 0	The water environment of the ditches exhibits mostly typical conditions; however impacts are present due to drought. Please see the following page for the individual parameter scores.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 5 with 0	Wetlands are dominated by a mixture of native and exotic/invasive species. Please see the following page for the individual parameter scores.

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres
0.47 0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
-0.47

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

	Location Landscape Support	10	7	4	0	PARAMETER SCORE
a	Quality of habitats outside area for wildlife	fulfill optimal life history requirements of wildlife	fulfill most but not all requirement	habitat availability outside area fair but excludes some wildlife	no habitats available outside site to support wildlife	4
b	Invasive exotics and other exotics	Not present	some invasive exotics in plant community	many invasive exotics and other exotics in community	plant community consists mainly of invasive exotics	4
c	Wildlife access to and from assessment area and other areas	unobstructed	partially limited	substantially limited	access completely blocked	4
d	Areas downstream of assessment area	beneficial and unobstructed	benefits partially limited by either distance or obstructions	benefits substantially limited by either distance or obstructions	no benefits to downstream areas	4
e	Effects of land use outside of area on wildlife	no ill effects	minimal impacts	substantial impacts	severe impacts	4
f	Hydrologically connected areas downstream of area	not limited by hydrological flow restriction	partially limited	substantially limited	no benefits to downstream areas	4
g	Dependency of downstream areas on assessment area	Downstream areas critically dependant and would suffer from alterations to hydrology	Downstream areas significantly dependent on assessment area	minimal benefits from assessment area	little or no benefit to downstream areas	4
h	For upland areas, location in relation to benefit and protection of wetland	upland provides optimal protection	upland provides some protection	upland provides little protection	upland provides no protection of wetland	N/A

LOCATION/LANDSCAPE SCORE
4

	Water Environment	10	7	4	0	PARAMETER SCORE
a	Water levels and flow	appropriate water levels considering season, tidal cycle, and weather	water level slightly higher or lower than appropriate	water levels and flow are moderately higher or lower than appropriate	water levels or flow exhibit an extreme degree of deviation	4
b	Water level indicators in relation to type of system being evaluatec	distinct water level indicators	indicators not as distinct, but still consistent with expected	indicators not distinct, and not consistent with expected	indicators not present or are greatly inconsistent with expected	6
c	Soil moisture for system type	appropriate soil type and moisture	soil oxidation or subsidence is minimal, soil drier than expected	soil moisture has deviated from appropriate for system and season	strong evidence of substantial soil desiccation, oxidation, or subsidence	7
d	Soil erosion or deposition patterns	typical, not indicative of altered flow rates	patterns indicate minor alterations in flow rates	patterns strongly atypical and indicate alterations in flow rates	patterns greatly atypical indicating alterations in flow rates	6
e	Evidence of fire history	typical for frequency and severity	indicative that frequency or severity may be greater than expected	indicative of much greater frequency and severity	great deviation from typical	N/A
f	Vegetation or benthic community zonation of all strata	appropriate for the type of system being evaluated	zonation in some strata inappropriate for system type	zonation in most strata inappropriate for system type	all strata inappropriate for system type	6
g	Signs of hydrologic stress on vegetation	no signs of stress on vegetation	slightly greater mortality of vegetation, signs of stress	strong evidence of greater than normal mortality	vegetation has strong evidence of much greater than normal mortality	6
h	Evidence of use by animals with specific hydrological requirements	expected for site hydrology	less than expected evidence of animals	greatly reduced evidence of animals with specific requirements	lacking those species with specific requirements	5
i	Composition of wetland plants with respect to tolerance	plant community not characterized by species tolerant to quality degradation	some of community consists of tolerant species	most of community composed of tolerant species	community predominantly consists of tolerant species	4
j	Direct observation of standing water with respect to discoloration, turbidity, or oil sheen	no indicators of water quality degradation	slight indication of water quality degradation	moderate water quality degradation such as discoloration, turbidity, or oil sheen	significant water quality degradation	4
k	Existing water quality data indicates conditions supporting ecological value	water quality indicates optimal conditions for community type	slight deviation from what is normal	moderate deviation from the normal	severe deviation from the normal	N/A
l	Water depth, wave energy, currents, and light penetration	optimal for community type	generally sufficient for type of community	not well suited for the type of community	inappropriate for community type	4

WATER ENVIRONMENT SCORE
5

	Vegetation Community Structure	10	7	4	0	PARAMETER SCORE
a	Plant cover - desirable species in canopy, shrub, or ground stratum	all or nearly all plant cover is appropriate	majority of plant cover is appropriate	majority of plant cover is inappropriate	no appropriate or desirable species	4
b	Presence of invasive exotics or other exotics	no invasives present	minimal invasives present	majority of plant cover is invasive exotic or exotic	high presence of cover by invasives	4
c	Evidence of regeneration or recruitment	strong evidence of regeneration and or recruitment	near normal evidence of regeneration or recruitment	minimal evidence of regeneration or recruitment	no evidence of regeneration or recruitment	4
d	Age and size distribution	typical of the system	slightly atypical age and size distribution	atypical distribution and indicative of permanent deviation	high percentage of dead or dying vegetation	6
e	Density and quality of coarse woody debris, snags, den and cavities	optimal structural habitat for system type	adequate structural habitat for system type	either not present or greater than normal because of poor plant community health	either not present or greater than normal because of dead or dying plant community	N/A
f	Plant condition- evidence of chlorotic or spindly growth or insect damage	good plant condition no evidence of abnormalities	generally good plant condition with little evidence stress	generally poor plant condition with evidence of stress	very poor plant condition	6
g	Land management practices for long-term viability of plant community	optimal	generally appropriate, but there may be some fire suppression or water control	partial removal or alteration of natural structures or introduction of artificial features	removal or alteration of natural structure intro of ditches or furrows	N/A
h	Topographic features, such as refugia ponds, creek channels, flats or hummocks	all present and normal for area being assessed	slightly less than optimal for area being assessed	reduction in extent substantial	lack of features being assessed	N/A
i	Submerged aquatic plant communities are present, any evidence of siltation or algal growth	no evidence of siltation or algal growth	minor degree of siltation or algal growth	moderate degree of siltation or algal growth	high degree of siltation or algal growth	6
j	If upland mitigation area, life history support for fish and wildlife	plant community provides optimal level of habitat	plant community provides adequate level of habitat	plant community provides moderate level of habitat	little or no habitat	N/A

VEGETATION SCORE
5

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name OUC- Osceola to Cane Island Tap		Application Number		Assessment Area Name or Number Wetlands 196E-A, 197A, 198A, 200A, 201A, 203A, 205A, 206C, 207A, 210A, 212B, 213A, 214A, 214B	
FLUCCs code 534 - Reservoirs		Further classification (optional)		Impact or Mitigation Site? Impact	Assessment Area Size 18.4 acres
Basin/Watershed Name/Number		Affected Waterbody (Class)		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) none	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Wetlands are isolated, located within road and highway areas, occasionally bordered by forested areas. Some are hydrologically connected to mixed forested wetlands and cypress forests.					
Assessment area description Small reservoirs exist along the transmission corridor ROW and serve as stormwater retention basins. The banks and littoral zones are vegetated with a mix of species that include torpedo grass (<i>Panicum repens</i>), cattail (<i>Typha</i> spp.), lemon bacopa (<i>Bacopa caroliniana</i>), beaksedge (<i>Rhynchospora</i> spp.), red maple (<i>Acer rubrum</i>), wax myrtle (<i>Myrica cerifera</i>), sandweed (<i>Hypericum fasciculatum</i>), bulltounge arrowhead (<i>Sagittaria lancifolia</i>), southern watergrass (<i>Luziola flutans</i>), watershield (<i>Brasenia schreberi</i>), water lily (<i>Nymphaea</i> sp.) bushy bluestem (<i>Andropogon glomeratus</i>), and broomsedge bluestem (<i>Andropogon virginicus</i>).					
Significant nearby features highways, transmission lines		Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique			
Functions Water treatment and storage		Mitigation for previous permit/other historic use N/A			
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Wading birds, deer, and feral hogs		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Occasional use by wading birds such as white ibis (<i>Eudocimus albus</i>) (SSC), wood stork (<i>Mycteria americana</i>) (E), and little blue heron (<i>Egretta caerulea</i>) (SSC).			
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Largemouth bass (<i>Micropterus salmoides</i>), Wilson's snipe (<i>Gallinago gallinago</i>), southern leopard frog (<i>Rana sphenoccephala</i>), and raccoon (<i>Procyon lotor</i>) were observed during the site visit.					
Additional relevant factors:					
Assessment conducted by: M. Arrants		Assessment date(s): December-07			

PART II A – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name OUC- Osceola to Cane Island Tap	Application Number	Assessment Area Name or Number Wetlands 196E-A, 197A, 198A, 200A, 201A, 203A, 205A, 206C-1, 207A, 210A, 212B, 213A, 214A, 214B (FLUCFCS 530)
Impact or Mitigation Impact	Assessment conducted by: M. Arrants	Assessment date: Dec-07

Scoring Guidance The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Optimal (10) Condition is optimal and fully supports wetland/surface water functions	Moderate(7) Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal (4) Minimal level of support of wetland/surface water functions	Not Present (0) Condition is insufficient to provide wetland/surface water functions
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.500(6)(a) Location and Landscape Support w/o pres or current 4 with 0	Location and landscape support variable is decreased due to location within road and highway areas. Please see the following page for the individual parameter scores.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current 5 with 0	The water environment of the reservoirs exhibits mostly typical conditions; however some impacts are present due to drought. Please see the following page for the individual parameter scores.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 6 with 0	Wetlands are dominated by a mixture of native and exotic/invasive species. Please see the following page for the individual parameter scores.

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.50	0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = (0.15 x 0.50) = 0.08

Delta = [with-current]
-0.50

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

Uniform Mitigation Assessment Method - Individual Parameter Scores

SITE: OUC-Osceola -Cane Island Tap

Wetland ID 196E-A, 197A, 198A, 200A,
201A, 203A, 205A, 206C-1, 207A, 210A,
212B, 213A, 214A, 214B
Reservoirs (FLUCFCS 530)OVERALL UMAM SCORE
0.50

	Location Landscape Support	10	7	4	0	PARAMETER SCORE
a	Quality of habitats outside area for wildlife	fulfill optimal life history requirements of wildlife	fulfill most but not all requirements	habitat availability outside area fair but excludes some wildlife	no habitats available outside site to support wildlife	4
b	Invasive exotics and other exotics	Not present	some invasive exotics in plant community	many invasive exotics and other exotics in community	plant community consists mainly of invasive exotics	4
c	Wildlife access to and from assessment area and other areas	unobstructed	partially limited	substantially limited	access completely blocked	4
d	Areas downstream of assessment area	beneficial and unobstructed	benefits partially limited by either distance or obstructions	benefits substantially limited by either distance or obstructions	no benefits to downstream areas	4
e	Effects of land use outside of area on wildlife	no ill effects	minimal impacts	substantial impacts	severe impacts	4
f	Hydrologically connected areas downstream of area	not limited by hydrological flow restrictions	partially limited	substantially limited	no benefits to downstream areas	4
g	Dependency of downstream areas on assessment area	Downstream areas critically dependant and would suffer from alterations to hydrology	Downstream areas significantly dependent on assessment area	minimal benefits from assessment area	little or no benefit to downstream areas	4
h	For upland areas, location in relation to benefit and protection of wetland	upland provides optimal protection	upland provides some protection	upland provides little protection	upland provides no protection of wetland	N/A

LOCATION/LANDSCAPE SCORE
4.0

	Water Environment	10	7	4	0	PARAMETER SCORE
a	Water levels and flow	appropriate water levels considering season, tidal cycle, and weather	water level slightly higher or lower than appropriate	water levels and flow are moderately higher or lower than appropriate	water levels or flow exhibit an extreme degree of deviation	4
b	Water level indicators in relation to type of system being evaluated	distinct water level indicators	indicators not as distinct, but still consistent with expected	indicators not distinct, and not consistent with expected	indicators not present or are greatly inconsistent with expected	5
c	Soil moisture for system type	appropriate soil type and moisture	soil oxidation or subsidence is minimal, soils drier than expected	soil moisture has deviated from appropriate for system and season	strong evidence of substantial soil desiccation, oxidation, or subsidence	4
d	Soil erosion or deposition patterns	typical, not indicative of altered flow rates	patterns indicate minor alterations in flow rates	patterns strongly atypical and indicate alterations in flow rates	patterns greatly atypical indicating alterations in flow rates	6
e	Evidence of fire history	typical for frequency and severity	indicative that frequency or severity may be greater than expected	indicative of much greater frequency and severity	great deviation from typical	N/A
f	Vegetation or benthic community zonation of all strata	appropriate for the type of system being evaluated	zonation in some strata inappropriate for system type	zonation in most strata inappropriate for system type	all strata inappropriate for system type	5
g	Signs of hydrologic stress on vegetation	no signs of stress on vegetation	slightly greater mortality of vegetation, signs of stress	strong evidence of greater than normal mortality	vegetation has strong evidence of much greater than normal mortality	5
h	Evidence of use by animals with specific hydrological requirements	expected for site hydrology	less than expected evidence of animals	greatly reduced evidence of animals with specific requirements	lacking those species with specific requirements	6
i	Composition of wetland plants with respect to tolerance	plant community not characterized by species tolerant to quality degradation	some of community consists of tolerant species	most of community composed of tolerant species	community predominantly consists of tolerant species	6
j	Direct observation of standing water with respect to discoloration, turbidity, or oil sheen	no indicators of water quality degradation	slight indication of water quality degradation	moderate water quality degradation such as discoloration, turbidity, or oil sheen	significant water quality degradation	4
k	Existing water quality data indicates conditions supporting ecological value	water quality indicates optimal conditions for community type	slight deviation from what is normal	moderate deviation from the normal	severe deviation from the normal	N/A
l	Water depth, wave energy, currents, and light penetration	optimal for community type	generally sufficient for type of community	not well suited for the type of community	inappropriate for community type	6

WATER ENVIRONMENT SCORE
5

	Vegetation Community Structure	10	7	4	0	PARAMETER SCORE
a	Plant cover - desirable species in canopy, shrub, or ground stratum	all or nearly all plant cover is appropriate	majority of plant cover is appropriate	majority of plant cover is inappropriate	no appropriate or desirable species	7
b	Presence of invasive exotics or other exotics	no invasives present	minimal invasives present	majority of plant cover is invasive exotic or exotic	high presence of cover by invasives	5
c	Evidence of regeneration or recruitment	strong evidence of regeneration and or recruitment	near normal evidence of regeneration or recruitment	minimal evidence of regeneration or recruitment	no evidence of regeneration or recruitment	7
d	Age and size distribution	typical of the system	slightly atypical age and size distribution	atypical distribution and indicative of permanent deviation	high percentage of dead or dying vegetation	8
e	Density and quality of coarse woody debris, snags, den and cavities	optimal structural habitat for system type	adequate structural habitat for system type	either not present or greater than normal because of poor plant community health	either not present or greater than normal because of dead or dying plant community	N/A
f	Plant condition- evidence of chlorotic or spindly growth or insect damage	good plant condition no evidence of abnormalities	generally good plant condition with little evidence stress	generally poor plant condition with evidence of stress	very poor plant condition	7
g	Land management practices for long-term viability of plant community	optimal	generally appropriate, but there may be some fire suppression or water control	partial removal or alteration of natural structures or introduction of artificial features	removal or alteration of natural structure intro of ditches or furrows	N/A
h	Topographic features, such as refugia ponds, creek channels, flats or hummocks	all present and normal for area being assessed	slightly less than optimal for area being assessed	reduction in extent substantial	lack of features being assessed	N/A
i	Submerged aquatic plant communities are present, any evidence of siltation or algal growth	no evidence of siltation or algal growth	minor degree of siltation or algal growth	moderate degree of siltation or algal growth	high degree of siltation or algal growth	4
j	If upland mitigation area, life history support for fish and wildlife	plant community provides optimal level of habitat	plant community provides adequate level of habitat	plant community provides moderate level of habitat	little or no habitat	N/A

VEGETATION SCORE
6

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name OUC Cane Island Tap to Taft Substation		Application Number		Assessment Area Name or Number Wetland 49-A	
FLUCFCS code 510		Further classification (optional)		Impact or Mitigation Site? Baseline	
Assessment Area Size					
Basin/Watershed Name/Number Bonnet Creek		Affected Waterbody (Class)		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) none	
Geographic relationship to any hydrologic connection with wetlands, other surface water, uplands Wetland is a channelized creek that serves as a drainage canal					
Assessment area description Wetland is a channelized stream with improved banks. Flora observed include <i>Salix caroliniana</i> , <i>Ludwigia octovalvis</i> , <i>Alternanthera philoxeroides</i> , <i>Panicum repens</i> , <i>Ludwigia peruviana</i> , <i>Polygonum</i> spp., <i>Bacopa monnieri</i> , and <i>Typha latifolia</i>					
Significant nearby features Transmission Lines, urban development and major roadways			Uniqueness (considering the relative rarity in relation to the regional Not unique		
Functions Drainage, wildlife habitat			Mitigation for previous permit/other historic use no		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to fishes, herpetofauna, raccoons, avifauna			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the Possible occasional use by foraging wading birds: White ibis (SSC), little blue heron (SSC), snowy egret (SSC), tricolored heron (SSC), wood stork (E)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):					
Additional relevant factors:					
Assessment conducted by: M. Arrants, N Goddard			Assessment date(s): April-07		

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name OUC Cane Island Tap to Taft Substation	Application Number	Assessment Area Name or Number 49-A Bonnet Creek
Impact or Mitigation Baseline	Assessment conducted by: M Arrants, N. Goddard	Assessment date: April-07

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support w/o pres or current with 6 N/A	Provides drainage for surrounding areas (A-5, B-7, C-5, D-5, E-4, F-8)
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 5 N/A	Provides little beneficial habitat due to channelized conditions (A-6, B-7, C-6, D-3, E-n/a, F-6, G-7, H-7, I-5, J-4)
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 5 N/A	Vegetative community and benthic communities are poor due to land use and canal design (A-6, B-7, C-6, D-5, E-0, F-7, G-2, H-4, I-4)

Score = sum of above scores/30 (if uplands, divide by 20)	
current	with
or w/o pres	
0.53	N/A

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
No impact

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name OUC- Osceola to Cane Island Tap		Application Number		Assessment Area Name or Number Wetland 212A	
FLUCCs code 625 - Hydric Pine Flatwoods		Further classification (optional)		Impact or Mitigation Site? Impact	
Assessment Area Size 0.65 acres					
Basin/Watershed Name/Number		Affected Waterbody (Class)		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands The wetland is located within the transmission line ROW adjacent to the highway and commercial areas. It is not hydrologically connected to any other wetlands within the transmission line ROW. The wetland is intersected by a drainage ditch.					
Assessment area description There is one hydric pine flatwoods wetland along the ROW. This habitat is dominated by cabbage palm (<i>Sabal palmetto</i>), slash pine (<i>Pinus elliottii</i>), pond pine (<i>Pinus serotina</i>), red maple (<i>Acer rubrum</i>), water oak (<i>Quercus nigra</i>), wax myrtle (<i>Myrica cerifera</i>), buttonbush (<i>Cephalanthus occidentalis</i>), Canada goldenrod (<i>Solidago canadensis</i>), gallberry (<i>Ilex glabra</i>), and sweetbay (<i>Magnolia virginiana</i>).					
Significant nearby features highways, transmission lines		Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique			
Functions Wildlife habitat, natural water treatment and storage		Mitigation for previous permit/other historic use N/A			
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Wading birds, deer, and feral hogs		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) None			
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): No wildlife was observed during the site visit.					
Additional relevant factors:					
Assessment conducted by: M. Arrants		Assessment date(s): 12/12/2007- 12/13/2007			

PART II A – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name OUC- Osceola to Cane Island Tap	Application Number	Assessment Area Name or Number Wetland 212A (FLUCFCS 625)
Impact or Mitigation Existing Condition	Assessment conducted by: M. Arrants	Assessment date: Dec-07

Scoring Guidance The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Optimal (10) Condition is optimal and fully supports wetland/surface water functions	Moderate(7) Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal (4) Minimal level of support of wetland/surface water functions	Not Present (0) Condition is insufficient to provide wetland/surface water functions
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.500(6)(a) Location and Landscape Support w/o pres or current 6 with 0	Location and landscape support variable is decreased due to proximity of roadways, the Osceola substation, and transmission lines. Some wetlands are hydrologically connected to forested systems. Please see the following page for the individual parameter scores.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current 7 with 0	The water environment is impacted due to drought conditions. Please see the following page for the individual parameter scores.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 7 with 0	Wetlands are dominated by native species with several exotic/nuisance species. Please see the following page for the individual parameter scores.

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres
with
0.67
0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres

Delta = [with-current]
-0.67

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

	Location Landscape Support	10	7	4	0	PARAMETER SCORE
a	Quality of habitats outside area for wildlife	fulfill optimal life history requirements of wildlife	fulfill most but not all requirement	habitat availability outside area fair but excludes some wildlife	no habitats available outside site to support wildlife	7
b	Invasive exotics and other exotics	Not present	some invasive exotics in plant community	many invasive exotics and other exotics in community	plant community consists mainly of invasive exotics	5
c	Wildlife access to and from assessment area and other areas	unobstructed	partially limited	substantially limited	access completely blocked	7
d	Areas downstream of assessment area	beneficial and unobstructed	benefits partially limited by either distance or obstructions	benefits substantially limited by either distance or obstructions	no benefits to downstream areas	7
e	Effects of land use outside of area on wildlife	no ill effects	minimal impacts	substantial impacts	severe impacts	6
f	Hydrologically connected areas downstream of area	not limited by hydrological flow restriction	partially limited	substantially limited	no benefits to downstream areas	6
g	Dependency of downstream areas on assessment area	Downstream areas critically dependant and would suffer from alterations to hydrology	Downstream areas significantly dependent on assessment area	minimal benefits from assessment area	little or no benefit to downstream areas	6
h	For upland areas, location in relation to benefit and protection of wetland	upland provides optimal protection	upland provides some protection	upland provides little protection	upland provides no protection of wetland	N/A

LOCATION/LANDSCAPE SCORE
6

	Water Environment	10	7	4	0	PARAMETER SCORE
a	Water levels and flow	appropriate water levels considering season, tidal cycle, and weather	water level slightly higher or lower than appropriate	water levels and flow are moderately higher or lower than appropriate	water levels or flow exhibit an extreme degree of deviation	6
b	Water level indicators in relation to type of system being evaluatec	distinct water level indicators	indicators not as distinct, but still consistent with expected	indicators not distinct, and not consistent with expected	indicators not present or are greatly inconsistent with expected	7
c	Soil moisture for system type	appropriate soil type and moisture	soil oxidation or subsidence is minimal, soil drier than expected	soil moisture has deviated from appropriate for system and season	strong evidence of substantial soil desiccation, oxidation, or subsidence	6
d	Soil erosion or deposition patterns	typical, not indicative of altered flow rates	patterns indicate minor alterations in flow rates	patterns strongly atypical and indicate alterations in flow rates	patterns greatly atypical indicating alterations in flow rates	7
e	Evidence of fire history	typical for frequency and severity	indicative that frequency or severity may be greater than expected	indicative of much greater frequency and severity	great deviation from typical	N/A
f	Vegetation or benthic community zonation of all strata	appropriate for the type of system being evaluated	zonation in some strata inappropriate for system type	zonation in most strata inappropriate for system type	all strata inappropriate for system type	7
g	Signs of hydrologic stress on vegetation	no signs of stress on vegetation	slightly greater mortality of vegetation, signs of stress	strong evidence of greater than normal mortality	vegetation has strong evidence of much greater than normal mortality	7
h	Evidence of use by animals with specific hydrological requirements	expected for site hydrology	less than expected evidence of animals	greatly reduced evidence of animals with specific requirements	lacking those species with specific requirement	7
i	Composition of wetland plants with respect to tolerance	plant community not characterized by species tolerant to quality degradation	some of community consists of tolerant species	most of community composed of tolerant species	community predominantly consists of tolerant species	7
j	Direct observation of standing water with respect to discoloration, turbidity, or oil sheen	no indicators of water quality degradation	slight indication of water quality degradation	moderate water quality degradation such as discoloration, turbidity, or oil sheen	significant water quality degradation	N/A
k	Existing water quality data indicates conditions supporting ecological value	water quality indicates optimal conditions for community type	slight deviation from what is normal	moderate deviation from the normal	severe deviation from the normal	N/A
l	Water depth, wave energy, currents, and light penetration	optimal for community type	generally sufficient for type of community	not well suited for the type of community	inappropriate for community type	N/A

WATER ENVIRONMENT SCORE
7

	Vegetation Community Structure	10	7	4	0	PARAMETER SCORE
a	Plant cover - desirable species in canopy, shrub, or ground stratum	all or nearly all plant cover is appropriate	majority of plant cover is appropriate	majority of plant cover is inappropriate	no appropriate or desirable species	6
b	Presence of invasive exotics or other exotics	no invasives present	minimal invasives present	majority of plant cover is invasive exotic or exotic	high presence of cover by invasives	5
c	Evidence of regeneration or recruitment	strong evidence of regeneration and or recruitment	near normal evidence of regeneration or recruitment	minimal evidence of regeneration or recruitment	no evidence of regeneration or recruitment	7
d	Age and size distribution	typical of the system	slightly atypical age and size distribution	atypical distribution and indicative of permanent deviation	high percentage of dead or dying vegetation	7
e	Density and quality of coarse woody debris, snags, den and cavities	optimal structural habitat for system type	adequate structural habitat for system type	either not present or greater than normal because of poor plant community health	either not present or greater than normal because of dead or dying plant community	N/A
f	Plant condition- evidence of chlorotic or spindly growth or insect damage	good plant condition no evidence of abnormalities	generally good plant condition with little evidence stress	generally poor plant condition with evidence of stress	very poor plant condition	7
g	Land management practices for long-term viability of plant community	optimal	generally appropriate, but there may be some fire suppression or water control	partial removal or alteration of natural structures or introduction of artificial features	removal or alteration of natural structure intro of ditches or furrows	7
h	Topographic features, such as refugia ponds, creek channels, flats or hummocks	all present and normal for area being assessed	slightly less than optimal for area being assessed	reduction in extent substantial	lack of features being assessed	7
i	Submerged aquatic plant communities are present, any evidence of siltation or algal growth	no evidence of siltation or algal growth	minor degree of siltation or algal growth	moderate degree of siltation or algal growth	high degree of siltation or algal growth	N/A
j	If upland mitigation area, life history support for fish and wildlife	plant community provides optimal level of habitat	plant community provides adequate level of habitat	plant community provides moderate level of habitat	little or no habitat	N/A

VEGETATION SCORE
7

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name OUC- Osceola to Cane Island Tap		Application Number		Assessment Area Name or Number Wetlands 206A, 212C	
FLUCCs code 630 - Wetland Forested Mixed		Further classification (optional)		Impact or Mitigation Site? Impact	Assessment Area Size 3.3 acres
Basin/Watershed Name/Number		Affected Waterbody (Class)		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Mixed forested wetlands are located along the transmission line ROW. Wetland 212C is hydrologically connected to nearby freshwater marshes within the transmission line ROW and other forested wetlands. Wetland 206A appears to be isolated.					
Assessment area description Two parcels of mixed wetland forest occur along the ROW. These habitats are dominated by cabbage palm (<i>Sabal palmetto</i>), slash pine (<i>Pinus elliotii</i>), pond pine (<i>Pinus serotina</i>), cypress (<i>Taxodium distichum</i>), dahoon holly (<i>Ilex cassine</i>), red maple (<i>Acer rubrum</i>), ash (<i>Fraxinus</i> spp.), sweetbay (<i>Magnolia virginiana</i>), bladderwort (<i>Utricularia</i> spp.), and blackgum (<i>Nyssa sylvatica</i>).					
Significant nearby features highways, transmission lines			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique		
Functions Wildlife habitat, natural water treatment and storage			Mitigation for previous permit/other historic use N/A		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Wading birds, deer, and feral hogs			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Occasional use by wading birds such as white ibis (<i>Eudocimus albus</i>) (SSC), wood stork (<i>Mycteria americana</i>) (E), and little blue heron (<i>Egretta caerulea</i>) (SSC).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): White tailed deer (<i>Odocoileus virginianus</i>), gray fox (<i>Urocyon cinereoargenteus</i>), bobcat, (<i>Lynx rufus</i>), coyote (<i>Canis latrans</i>), raccoon (<i>Procyon lotor</i>), river otter (<i>Lutra canadensis</i>), nine banded armadillo (<i>Dasypus novemcinctus</i>), killdeer (<i>Charadrius vociferus</i>), wood duck (<i>Aix sponsa</i>), double crested cormorant (<i>Phalacrocorax auritus</i>), great blue heron (<i>Ardea herodias</i>), white ibis, glossy ibis (<i>Plegadis falcinellus</i>), great egret (<i>Casmerodius albus</i>), and wood stork were observed during the site visit.					
Additional relevant factors:					
Assessment conducted by: M. Arrants			Assessment date(s): 12/12/2007- 12/13/2007		

PART II A – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name OUC- Osceola to Cane Island Tap	Application Number	Assessment Area Name or Number Wetlands 206A, 212C (FLUCFCS 630)
Impact or Mitigation Existing Condition	Assessment conducted by: M. Arrants	Assessment date: Dec-07

Scoring Guidance The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Optimal (10) Condition is optimal and fully supports wetland/surface water functions	Moderate(7) Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal (4) Minimal level of support of wetland/surface water functions	Not Present (0) Condition is insufficient to provide wetland/surface water functions
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.500(6)(a) Location and Landscape Support w/o pres or current 6 with 0	Location and landscape support variable is decreased due to proximity of roadways and transmission lines. Some wetlands are hydrologically connected to forested systems. Please see the following page for the individual parameter scores.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current 7 with 0	The water environment is impacted due to drought conditions. Please see the following page for the individual parameter scores.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 8 with 0	Wetlands are dominated by native species with some exotic/nuisance species. Please see the following page for the individual parameter scores.

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres 0.70 with 0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
-0.70

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

SITE: OUC- Osceola to Cane Island
Tap

OVERALL UMAM SCORE

0.70

LOCATION/LANDSCAPE SCORE
6

WATER ENVIRONMENT SCORE
7

VEGETATION SCORE

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name OUC- Osceola to Cane Island Tap		Application Number		Assessment Area Name or Number Wetlands 196 C-A, 196C-B, 196 F-A, 196F-B, 199B, 199C, 202A, 202B, 204A, 207B, 212A, 217A, 217B, 219A	
FLUCCs code 641 - Freshwater Marshes		Further classification (optional)		Impact or Mitigation Site? Impact	Assessment Area Size 11.46 acres
Basin/Watershed Name/Number		Affected Waterbody (Class)		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Wetlands are located along the transmission line ROW. Some are hydrologically connected to nearby forested wetlands adjacent to the the transmission line ROW. Most are isolated.					
Assessment area description Freshwater marsh wetlands are common along the ROW. These habitats are dominated by emergent herbaceous species, including redtop panicum (<i>Panicum rigidulum</i>), pickerelweed (<i>Pontederia cordata</i>), lemon bacopa (<i>Bacopa caroliniana</i>), spike rush (<i>Eleocharis</i> sp.), beaksedge (<i>Rhynchospora</i> sp.), sedges (<i>Cyperus</i> spp.), dogfennel (<i>Eupatorium capillifolium</i>), ceasar weed (<i>Urena lobata</i>), Walter's sedge (<i>Carex walteriana</i>), mistflower (<i>Eupatorium coelestinum</i>), slender amaranth (<i>Amaranthus viridis</i>), purple nightshade (<i>Solanum xanti</i>), American pokeweed (<i>Phytolacca americana</i>), nutrushes (<i>Scleria</i> spp.), Jamaica swamp sawgrass (<i>Cladium jamaicense</i>), maidencane (<i>Panicum hemitomon</i>), lizard's tail (<i>Saururus cernuus</i>), rattlebox (<i>Sesbania</i> spp.), marsh pennywort (<i>Hydrocotyle</i> sp), sandweed (<i>Hypericum fasciculatum</i>), alligatorflag (<i>Thalia geniculata</i>), Virginia chain fern (<i>Woodwardia virginica</i>), bushy bluestem (<i>Andropogon glomeratus</i>), and broomsedge bluestem (<i>Andropogon virginicus</i>). Common shrub species within freshwater marsh habitats include Peruvian primrose willow (<i>Ludwigia peruviana</i>), as well as occasional individuals of groundsel tree (<i>Baccharis halimifolia</i>), red maple (<i>Acer rubrum</i>), dahoon holly (<i>Ilex cassine</i>), and pond cypress (<i>Taxodium ascendens</i>).					
Significant nearby features roadways, transmission lines		Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique			
Functions Wildlife habitat, natural water treatment and storage		Mitigation for previous permit/other historic use N/A			
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Wading birds, deer, and feral hogs		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Occasional use by wading birds such as white ibis (<i>Eudocimus albus</i>) (SSC), wood stork (<i>Mycteria americana</i>) (E), and little blue heron (<i>Egretta caerulea</i>) (SSC).			
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): White tailed deer (<i>Odocoileus virginianus</i>), gray fox (<i>Urocyon cinereoargenteus</i>), black vulture (<i>Coragyps atratus</i>), red-shouldered hawk (<i>Buteo lineatus</i>), catbird (<i>Dumetella carolinensis</i>), yellow rumped warbler (<i>Dendroica coronata</i>), Eastern phoebe (<i>Sayornis phoebe</i>), green tree frog (<i>Hyla cinerea</i>), ribbon snake (<i>Thamnophis sauritus</i>), and evidence of feral hog (<i>Sus scrofa</i>) were observed during the site visit.					
Additional relevant factors:					
Assessment conducted by: M. Arrants		Assessment date(s): 12/12/2007- 12/13/2007			

PART II A – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name OUC- Osceola to Cane Island Tap	Application Number	Assessment Area Name or Number Wetlands 196 C-A, 196C-B, 196 F-A, 196F-B, 199B, 199C, 202A, 202B, 204A, 207B, 212A, 217A, 217B, 219A (FLUCFCS 641)
Impact or Mitigation Existing Condition	Assessment conducted by: M. Arrants	Assessment date: Dec-07

Scoring Guidance The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Optimal (10) Condition is optimal and fully supports wetland/surface water functions	Moderate(7) Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal (4) Minimal level of support of wetland/surface water functions	Not Present (0) Condition is insufficient to provide wetland/surface water functions
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.500(6)(a) Location and Landscape Support w/o pres or current 6 with 0	Location and landscape support variable is decreased due to proximity of roadways and transmission lines. Some wetlands are hydrologically connected to forested systems. Please see the following page for the individual parameter scores.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current 7 with 0	The water environment is impacted due to drought conditions. Please see the following page for the individual parameter scores.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 7 with 0	Wetlands are dominated by a mixture of native and exotic/nuisance species. Please see the following page for the individual parameter scores.

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres
0.67 0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
-0.67

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

Uniform Mitigation Assessment Method - Individual Parameter Scores

SITE: OUC- Osceola to Cane Island
TapWETLAND ID: 196 C-A, 196C-B, 196
F-A, 196F-B, 199B, 199C, 202A, 202B,
204A, 207B, 212A, 217A, 217B, 219A
Freshwater Marshes (FLUCFCS 641)OVERALL UMAM SCORE
0.67

	Location Landscape Support	10	7	4	0	PARAMETER SCORE
a	Quality of habitats outside area for wildlife	fulfill optimal life history requirements of wildlife	fulfill most but not all requirements	habitat availability outside area fair but excludes some wildlife	no habitats available outside site to support wildlife	7
b	Invasive exotics and other exotics	Not present	some invasive exotics in plant community	many invasive exotics and other exotics in community	plant community consists mainly of invasive exotics	5
c	Wildlife access to and from assessment area and other areas	unobstructed	partially limited	substantially limited	access completely blocked	7
d	Areas downstream of assessment area	beneficial and unobstructed	benefits partially limited by either distance or obstructions	benefits substantially limited by either distance or obstructions	no benefits to downstream areas	7
e	Effects of land use outside of area on wildlife	no ill effects	minimal impacts	substantial impacts	severe impacts	6
f	Hydrologically connected areas downstream of area	not limited by hydrological flow restrictions	partially limited	substantially limited	no benefits to downstream areas	7
g	Dependency of downstream areas on assessment area	Downstream areas critically dependant and would suffer from alterations to hydrology	Downstream areas significantly dependent on assessment area	minimal benefits from assessment area	little or no benefit to downstream areas	5
h	For upland areas, location in relation to benefit and protection of wetland	upland provides optimal protection	upland provides some protection	upland provides little protection	upland provides no protection of wetland	N/A

LOCATION/LANDSCAPE SCORE
6

	Water Environment	10	7	4	0	PARAMETER SCORE
a	Water levels and flow	appropriate water levels considering season, tidal cycle, and weather	water level slightly higher or lower than appropriate	water levels and flow are moderately higher or lower than appropriate	water levels or flow exhibit an extreme degree of deviation	6
b	Water level indicators in relation to type of system being evaluated	distinct water level indicators	indicators not as distinct, but still consistent with expected	indicators not distinct, and not consistent with expected	indicators not present or are greatly inconsistent with expected	7
c	Soil moisture for system type	appropriate soil type and moisture	soil oxidation or subsidence is minimal, soils drier than expected	soil moisture has deviated from appropriate for system and season	strong evidence of substantial soil desiccation, oxidation, or subsidence	6
d	Soil erosion or deposition patterns	typical, not indicative of altered flow rates	patterns indicate minor alterations in flow rates	patterns strongly atypical and indicate alterations in flow rates	patterns greatly atypical indicating alterations in flow rates	7
e	Evidence of fire history	typical for frequency and severity	indicative that frequency or severity may be greater than expected	indicative of much greater frequency and severity	great deviation from typical	N/A
f	Vegetation or benthic community zonation of all strata	appropriate for the type of system being evaluated	zonation in some strata inappropriate for system type	zonation in most strata inappropriate for system type	all strata inappropriate for system type	7
g	Signs of hydrologic stress on vegetation	no signs of stress on vegetation	slightly greater mortality of vegetation, signs of stress	strong evidence of greater than normal mortality	vegetation has strong evidence of much greater than normal mortality	7
h	Evidence of use by animals with specific hydrological requirements	expected for site hydrology	less than expected evidence of animals	greatly reduced evidence of animals with specific requirements	lacking those species with specific requirements	7
i	Composition of wetland plants with respect to tolerance	plant community not characterized by species tolerant to quality degradation	some of community consists of tolerant species	most of community composed of tolerant species	community predominantly consists of tolerant species	7
j	Direct observation of standing water with respect to discoloration, turbidity, or oil sheen	no indicators of water quality degradation	slight indication of water quality degradation	moderate water quality degradation such as discoloration, turbidity, or oil sheen	significant water quality degradation	N/A
k	Existing water quality data indicates conditions supporting ecological value	water quality indicates optimal conditions for community type	slight deviation from what is normal	moderate deviation from the normal	severe deviation from the normal	N/A
l	Water depth, wave energy, currents, and light penetration	optimal for community type	generally sufficient for type of community	not well suited for the type of community	inappropriate for community type	N/A

WATER ENVIRONMENT SCORE
7

	Vegetation Community Structure	10	7	4	0	PARAMETER SCORE
a	Plant cover - desirable species in canopy, shrub, or ground stratum	all or nearly all plant cover is appropriate	majority of plant cover is appropriate	majority of plant cover is inappropriate	no appropriate or desirable species	6
b	Presence of invasive exotics or other exotics	no invasives present	minimal invasives present	majority of plant cover is invasive exotic or exotic	high presence of cover by invasives	6
c	Evidence of regeneration or recruitment	strong evidence of regeneration and or recruitment	near normal evidence of regeneration or recruitment	minimal evidence of regeneration or recruitment	no evidence of regeneration or recruitment	7
d	Age and size distribution	typical of the system	slightly atypical age and size distribution	atypical distribution and indicative of permanent deviation	high percentage of dead or dying vegetation	7
e	Density and quality of coarse woody debris, snags, den and cavities	optimal structural habitat for system type	adequate structural habitat for system type	either not present or greater than normal because of poor plant community health	either not present or greater than normal because of dead or dying plant community	N/A
f	Plant condition- evidence of chlorotic or spindly growth or insect damage	good plant condition no evidence of abnormalities	generally good plant condition with little evidence stress	generally poor plant condition with evidence of stress	very poor plant condition	7
g	Land management practices for long-term viability of plant community	optimal	generally appropriate, but there may be some fire suppression or water control	partial removal or alteration of natural structures or introduction of artificial features	removal or alteration of natural structure intro of ditches or furrows	7
h	Topographic features, such as refugia ponds, creek channels, flats or hummocks	all present and normal for area being assessed	slightly less than optimal for area being assessed	reduction in extent substantial	lack of features being assessed	7
i	Submerged aquatic plant communities are present, any evidence of siltation or algal growth	no evidence of siltation or algal growth	minor degree of siltation or algal growth	moderate degree of siltation or algal growth	high degree of siltation or algal growth	N/A
j	If upland mitigation area, life history support for fish and wildlife	plant community provides optimal level of habitat	plant community provides adequate level of habitat	plant community provides moderate level of habitat	little or no habitat	N/A

VEGETATION SCORE
7