

PMLevyCOLPEm Resource

From: Hambrick, Gordon A SAJ [Gordon.A.Hambrick@usace.army.mil]
Sent: Friday, January 20, 2012 11:20 AM
To: Bruner, Douglas
Subject: FW: PEF LNP Nuclear Plant Project - UMAM Forms (UNCLASSIFIED)
Attachments: LNP-SiteImpactsUMAM Forms.pdf; LNP Mitigation Sites UMAM Forms.pdf

Classification: UNCLASSIFIED

Caveats: NONE

Doug, FYI.
Don

Gordon A. (Don) Hambrick, III
Senior Project Manager
Panama City Permits Section
US Army Corps of Engineers
Jacksonville District
1002 West 23rd Street, Suite 350
Panama City, Florida 32401

Office: 850-763-0717, ext. 25
Fax: 850-872-0231

-----Original Message-----

From: Dierolf, Amy C. [<mailto:Amy.Dierolf@pgnmail.com>]
Sent: Tuesday, January 17, 2012 3:52 PM
To: Hambrick, Gordon A SAJ
Cc: Snead, Paul
Subject: PEF LNP Nuclear Plant Project - UMAM Forms

Don,

Per your request, please find 2 files with the UMAM forms for the LNP site impacts and the Mitigation Sites.

The LNP-SiteImpactsUMAM Forms.pdf file includes the impacts for the entire LNP site, barge slip area and blowdown pipeline.

The LNP Mitigation Sites UMAM Forms.pdf file is a consolidated file with the UMAM forms for all of the mitigation sites (Boarshead Ranch, Brooker Creek, Goethe, LNP site, Homosassa and Five Mile Creek).

The UMAM forms for the impacts for the transmission lines and substations were previously submitted in the notebooks submitted for the transmission lines and substations.

Please let us know if you have any questions.

Amy

Amy Dierolf

Lead Environmental Specialist

Environmental Services

Progress Energy

PO Box 14042

PEF 903

St Petersburg, FL 33733

727-820-5657

amy.dierolf@pgnmail.com

Classification: UNCLASSIFIED

Caveats: NONE

Hearing Identifier: Levy_County_COL_Public
Email Number: 961

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Subject: FW: PEF LNP Nuclear Plant Project - UMAM Forms (UNCLASSIFIED)
Sent Date: 1/20/2012 11:20:00 AM
Received Date: 1/20/2012 11:20:32 AM
From: Hambrick, Gordon A SAJ

Created By: Gordon.A.Hambrick@usace.army.mil

Recipients:
"Bruner, Douglas" <Douglas.Bruner@nrc.gov>
Tracking Status: None

Post Office: EIS-MB08CPC.eis.ds.usace.army.mil

Files	Size	Date & Time
MESSAGE	1517	1/20/2012 11:20:32 AM
LNP-SiteImpactsUMAM Forms.pdf	491667	
LNP Mitigation Sites UMAM Forms.pdf	974862	

Options
Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

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

Site/Project Name Progress Energy Florida - Levy Nuclear Plant		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Mixed Wetland Harwood - Permanent Impacts	
FLUCFCs code 617		Further classification (optional)		Impact or Mitigation Site? IMPACT	Assessment Area Size (Acres) 4.5
Basin/Watershed Name/Number Waccasassa and Withlacoochee		Affected Waterbody (Class) Class III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands:</p> <p>Areas are surrounded by pine plantation and a mosaic of forested wetlands that have been subjected to logging. Wetlands are either directly connected with each other or are interconnected through hydric pine plantation. Furrows serve as conveyances allowing for water to travel along them.</p>					
<p>Assessment area description</p> <p>High quality forested wetland dominated by a mixture of hardwoods and conifers including pond cypress, slash pines, swamp tupelo, oaks, red maples, bays and cabbage palms with less coverage of naturally occurring conifer species (i.e., cypress) likely due to logging activities. Community structure is transitional based on the coverage of slash pines and dense shrub layers (i.e., fetterbush) and opportunistic species such as Virginia creeper, dog fennel and greenbrier. Although some pines are naturally occurring, many appear to be recruits from the surrounding land uses. Strong evidence of cypress logging (i.e., stumps) and hog rooting throughout.</p>					
Significant nearby features The AA is located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River. The AA abuts a transmission corridor to the west and is surrounded by pine plantation on the LNP property. The LNP property is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north.		<p>Uniqueness (considering the relative rarity in relation to the regional landscape.)</p> <p align="center">None</p>			
Functions Functions include wildlife feeding and refuge and water quality and storage benefits, although limited by the surrounding silviculture practices.		<p>Mitigation for previous permit/other historic use</p> <p align="center">None</p>			
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to birds (passerine, raptor and wading birds), small/medium mammals (hogs, etc.), amphibians and reptiles		<p>Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the wading birds (SSC)</p>			
<p>Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):</p> <p align="center">hog rooting</p>					
Additional relevant factors:					
Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt		Assessment date(s): Entrix - October 2009 thru January 2010, ESI - March 2011			

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

IMPACT

Site/Project Name Progress Energy Florida - Levy Nuclear Plant	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Mixed Wetland Harwood - Permanent Impacts
Impact or Mitigation IMPACT	Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt	Assessment date: Entrix - October 2009 thru January 2010, ESI - March 2011

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 with 5 0	w/o pres or current - Area is surrounded by pine plantation which provided minimal habitat and limited opportunity for wildlife utilization including foraging, refuge and passage. The AA is with the LNP property which is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north. The LNP property also abuts pine plantation to the east, Goethe State Forest to the north and is situated 8 miles east of the Gulf of Mexico and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau and the Withlacoochee River.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 6 0	w/o pres or current - Moderate hydrology based on disturbed hydroperiods, soils and community structure from years of silviculture practices. No distinct water level indicators. SHW appears at or below grade in some areas and 1-2 feet below historic seasonal high. Evidence of hydrologic stress (i.e., transitional vegetation, moderate pine recruitment and dying trees).
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 7 0	w/o pres or current - High quality forested wetland dominated by a mixture of hardwoods and conifers including pond cypress, slash pines, swamp tupelo, oaks, red maples, bays and cabbage palms with less coverage of naturally occurring conifer species (i.e., cypress) likely due to logging activities. Community structure is transitional based on the coverage of slash pines and dense shrub layers (i.e., fetterbush) and opportunistic species such as Virginia creeper, dog fennel and greenbrier. Although some pines are naturally occurring, many appear to be recruits from the surrounding land uses. Strong evidence of cypress logging (i.e., stumps) and hog rooting throughout.

Score = sum of above scores/30 (if uplands/20)
current or w/o pres with
0.6 0

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

For impact assessment areas
FL = delta x acres =
2.7000

Delta = [with-current]
0.6

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 Progress Energy Florida - Levy Nuclear Plant		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Mixed Wetland Harwood - Temporary Impacts	
FLUCFCs code 617		Further classification (optional)		Impact or Mitigation Site? IMPACT	Assessment Area Size (Acres) 0.3
Basin/Watershed Name/Number Waccasassa		Affected Waterbody (Class) Class III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Areas are surrounded by pine plantation and a mosaic of forested wetlands that have been subjected to logging. Wetlands are either directly connected with each other or are interconnected through hydric pine plantation. Furrows serve as conveyances allowing for water to travel along them.</p> <p>Assessment area description High quality forested wetland dominated by a mixture of hardwoods and conifers including pond cypress, slash pines, swamp tupelo, oaks, red maples, bays and cabbage palms with less coverage of naturally occurring conifer species (i.e., cypress) likely due to logging activities. Community structure is transitional based on the coverage of slash pines and dense shrub layers (i.e., fetterbush) and opportunistic species such as Virginia creeper, dog fennel and greenbrier. Although some pines are naturally occurring, many appear to be recruits from the surrounding land uses. Strong evidence of cypress logging (i.e., stumps) and hog rooting throughout.</p>					
Significant nearby features The AA is located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River. The AA abuts a transmission corridor to the west and is surrounded by pine plantation on the LNP property. The LNP property is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north.			Uniqueness (considering the relative rarity in relation to the regional None		
Functions Functions include wildlife feeding and refuge and water quality and storage benefits, although limited by the surrounding silviculture practices.			Mitigation for previous permit/other historic use None		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected birds (passerine, raptor and wading birds), small/medium mammals (hogs, etc.), amphibians and reptiles			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the wading birds (SSC)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): hog rooting					
Additional relevant factors:					
Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt			Assessment date(s): Entrix - October 2009 thru January 2010, ESI - March 2011		

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

IMPACT

Site/Project Name Progress Energy Florida - Levy Nuclear Plant	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Mixed Wetland Harwood - Temporary Impacts
Impact or Mitigation IMPACT	Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt	Assessment date: Entrix - October 2009 thru January 2010, ESI - March 2011

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	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 5 with 5	w/o pres or current - Area is surrounded by pine plantation which provided minimal habitat and limited opportunity for wildlife utilization including foraging, refuge and passage. The AA is with the LNP property which is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north. The LNP property also abuts pine plantation to the east, Goethe State Forest to the north and is situated 8 miles east of the Gulf of Mexico and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau and the Withlacoochee River. with - No loss anticipated from temporary impact. Area to be restored.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current 6 with 6	w/o pres or current - Moderate hydrology based on disturbed hydroperiods, soils and community structure from years of silviculture practices. No distinct water level indicators. SHW appears at or below grade in some areas and 1-2 feet below historic seasonal high. Evidence of hydrologic stress (i.e., transitional vegetation, moderate pine recruitment and dying trees). with - No loss in hydrologic function anticipated. Area to be restored
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 7 with 6	w/o pres or current - High quality forested wetland dominated by a mixture of hardwoods and conifers including pond cypress, slash pines, swamp tupelo, oaks, red maples, bays and cabbage palms with less coverage of naturally occurring conifer species (i.e., cypress) likely due to logging activities. Community structure is transitional based on the coverage of slash pines and dense shrub layers (i.e., fetterbush) and opportunistic species such as Virginia creeper, dog fennel and greenbrier. Although some pines are naturally occurring, many appear to be recruits from the surrounding land uses. Strong evidence of cypress logging (i.e., stumps) and hog rooting throughout. with - Partial loss in community structure due to time lag of the restoration effort.

Score = sum of above scores/30 (if uplands/20)
current or w/o pres 0.6 with 0.56667

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

For impact assessment areas
FL = delta x acres = 0.0100

Delta = [with-current]
0.03333333

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 Progress Energy Florida - Levy Nuclear Plant		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Mixed Wetland Harwood(Logged) -Clearing Only Impacts	
FLUCFCs code 617-1		Further classification (optional)		Impact or Mitigation Site? IMPACT	
				Assessment Area Size (Acres) 5.3	
Basin/Watershed Name/Number Waccasassa		Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands:</p> <p>Areas are surrounded by pine plantation and a mosaic of forested wetlands that have been subjected to logging. Wetlands are either directly connected with each other or are interconnected through hydric pine plantation. Furrows serve as conveyances allowing for water to travel along them.</p> <p>Assessment area description:</p> <p>Heavily logged forested wetland characterized by transitional vegetation with less than 50% coverage of trees. Community structure is very disturbed from logging activities with stumps and furrows remaining from thinning activities. Similar species as those found in forested wetlands, although few cypress and hardwood trees remaining and most coverage provided by transitional vegetation in the shrub layer and groundcover including immature slash pine and oaks, sweetgum, fetterbush, wax myrtle, saltbush, gallberry, buttonbush, broomsedge, maidencane, dog fennel, chain fern, red root, and various opportunistic species. Most cypress have been logged and other trees have been logged indiscriminately as a result of thinning activities providing less of a seed source for natural recruitment. Dead trees and hog rooting also prevalent.</p>					
Significant nearby features The AA is located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River. The AA abuts a transmission corridor to the west and is surrounded by pine plantation on the LNP property. The LNP property is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north.				Uniqueness (considering the relative rarity in relation to the regional None	
Functions Functions include wildlife feeding and refuge and water quality and storage benefits, although limited by the surrounding silviculture practices.				Mitigation for previous permit/other historic use None	
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to birds (passerine, raptor and wading birds), small/medium mammals (hogs, etc.), amphibians and reptiles				Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the wading birds (SSC)	
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): hog rooting					
Additional relevant factors:					
Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt				Assessment date(s): Entrix - October 2009 thru January 2010, ESI - March 2011	

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

IMPACT

Site/Project Name Progress Energy Florida - Levy Nuclear Plant	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Mixed Wetland Harwood - Permanent Impacts
Impact or Mitigation IMPACT	Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt	Assessment date: Entrix - October 2009 thru January 2010, ESI - March 2011

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 with 5 0	w/o pres or current - Area is surrounded by pine plantation which provided minimal habitat and limited opportunity for wildlife utilization including foraging, refuge and passage. The AA is with the LNP property which is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north. The LNP property also abuts pine plantation to the east, Goethe State Forest to the north and is situated 8 miles east of the Gulf of Mexico and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau and the Withlacoochee River.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 6 0	w/o pres or current - Moderate hydrology based on disturbed hydroperiods, soils and community structure from years of silviculture practices. No distinct water level indicators. SHW appears at or below grade in some areas and 1-2 feet below historic seasonal high. Evidence of hydrologic stress (i.e., transitional vegetation, moderate pine recruitment and dying trees).
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 7 0	w/o pres or current - High quality forested wetland dominated by a mixture of hardwoods and conifers including pond cypress, slash pines, swamp tupelo, oaks, red maples, bays and cabbage palms with less coverage of naturally occurring conifer species (i.e., cypress) likely due to logging activities. Community structure is transitional based on the coverage of slash pines and dense shrub layers (i.e., fetterbush) and opportunistic species such as Virginia creeper, dog fennel and greenbrier. Although some pines are naturally occurring, many appear to be recruits from the surrounding land uses. Strong evidence of cypress logging (i.e., stumps) and hog rooting throughout.

Score = sum of above scores/30 (if uplands/20)
current or w/o pres with
0.6 0

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

For impact assessment areas
FL = delta x acres =
2.7000

Delta = [with-current]
0.6

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 Progress Energy Florida - Levy Nuclear Plant		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Mixed Wetland Harwood(Logged) - Permanent Impacts	
FLUCFCs code 617-1		Further classification (optional)		Impact or Mitigation Site? IMPACT	Assessment Area Size (Acres) 24.5
Basin/Watershed Name/Number Waccasassa		Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Areas are surrounded by pine plantation and a mosaic of forested wetlands that have been subjected to logging. Wetlands are either directly connected with each other or are interconnected through hydric pine plantation. Furrows serve as conveyances allowing for water to travel along them.</p>					
<p>Assessment area description</p> <p>Heavily logged forested wetland characterized by transitional vegetation with less than 50% coverage of trees. Community structure is very disturbed from logging activities with stumps and furrows remaining from thinning activities. Similar species as those found in forested wetlands, although few cypress and hardwood trees remaining and most coverage provided by transitional vegetation in the shrub layer and groundcover including immature slash pine and oaks, sweetgum, fetterbush, wax myrtle, saltbush, gallberry, buttonbush, broomsedge, maidencane, dog fennel, chain fern, red root, and various opportunistic species. Most cypress have been logged and other trees have been logged indiscriminately as a result of thinning activities providing less of a seed source for natural recruitment. Dead trees and hog rooting also prevalent.</p>					
<p>Significant nearby features</p> <p>The AA is located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River. The AA abuts a transmission corridor to the west and is surrounded by pine plantation on the LNP property. The LNP property is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north.</p>			<p>Uniqueness (considering the relative rarity in relation to the regional</p> <p align="center">None</p>		
<p>Functions</p> <p>Functions include wildlife feeding and refuge and water quality and storage benefits, although limited by the surrounding silviculture practices.</p>			<p>Mitigation for previous permit/other historic use</p> <p align="center">None</p>		
<p>Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to</p> <p>birds (passerine, raptor and wading birds), small/medium mammals (hogs, etc.), amphibians and reptiles</p>			<p>Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the</p> <p align="center">wading birds (SSC)</p>		
<p>Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):</p> <p align="center">hog rooting</p>					
<p>Additional relevant factors:</p>					
<p>Assessment conducted by:</p> <p>Entrix - VAF/DDS, ESI - Gary Howalt</p>			<p>Assessment date(s):</p> <p>Entrix - October 2009 thru January 2010, ESI - March 2011</p>		

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

IMPACT

Site/Project Name Progress Energy Florida - Levy Nuclear Plant	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Mixed Wetland Harwood(Logged) - Permanent Impacts
Impact or Mitigation IMPACT	Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt	Assessment date: Entrix - October 2009 thru January 2010, ESI - March 2011

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 water functions	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 4 0	w/o pres or current - Area is surrounded by pine plantation which provided minimal habitat and limited opportunity for wildlife utilization including foraging, refuge and passage. The AA is with the LNP property which is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north. The LNP property also abuts pine plantation to the east, Goethe State Forest to the north and is situated 8 miles east of the Gulf of Mexico and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau and the Withlacoochee River.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 6 0	w/o pres or current - Moderate hydrology based on disturbed hydroperiods, soils and community structure from years of silviculture practices. No distinct water level indicators. SHW appears at or below grade in some areas and 1-2 feet below historic seasonal high. Evidence of hydrologic stress (i.e., transitional vegetation, moderate pine recruitment and dying trees).
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 5 0	w/o pres or current - Heavily logged forested wetland characterized by transitional vegetation with less than 50% coverage of trees. Community structure is very disturbed from logging activities with stumps and furrows remaining from thinning activities. Similar species as those found in forested wetlands, although few cypress and hardwood trees remaining and most coverage provided by transitional vegetation in the shrub layer and groundcover including immature slash pine and oaks, sweetgum, fetterbush, wax myrtle, saltbush, gallberry, buttonbush, broomsedge, maidencane, dog fennel, chain fern, red root, and various opportunistic species. Most cypress have been logged and other trees have been logged indiscriminately as a result of thinning activities providing less of a seed source for natural recruitment. Dead trees and hog rooting also prevalent.

Score = sum of above scores/30 (if uplands/20)
current or w/o pres with 0.5 0

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

For impact assessment areas
FL = delta x acres = 12.2500

Delta = [with-current]
0.5

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 Progress Energy Florida - Levy Nuclear Plant		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Mixed Wetland Harwood(Logged) -Temporary Impacts	
FLUCFCs code 617-1		Further classification (optional)		Impact or Mitigation Site? IMPACT	
				Assessment Area Size (Acres) 7.1	
Basin/Watershed Name/Number Waccasassa		Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Areas are surrounded by pine plantation and a mosaic of forested wetlands that have been subjected to logging. Wetlands are either directly connected with each other or are interconnected through hydric pine plantation. Furrows serve as conveyances allowing for water to travel along them.</p> <p>Assessment area description</p> <p>Heavily logged forested wetland characterized by transitional vegetation with less than 50% coverage of trees. Community structure is very disturbed from logging activities with stumps and furrows remaining from thinning activities. Similar species as those found in forested wetlands, although few cypress and hardwood trees remaining and most coverage provided by transitional vegetation in the shrub layer and groundcover including immature slash pine and oaks, sweetgum, fetterbush, wax myrtle, saltbush, gallberry, buttonbush, broomsedge, maidencane, dog fennel, chain fern, red root, and various opportunistic species. Most cypress have been logged and other trees have been logged indiscriminately as a result of thinning activities providing less of a seed source for natural recruitment. Dead trees and hog rooting also prevalent.</p>					
Significant nearby features The AA is located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River. The AA abuts a transmission corridor to the west and is surrounded by pine plantation on the LNP property. The LNP property is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north.			Uniqueness (considering the relative rarity in relation to the regional None		
Functions Functions include wildlife feeding and refuge and water quality and storage benefits, although limited by the surrounding silviculture practices.			Mitigation for previous permit/other historic use None		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to birds (passerine, raptor and wading birds), small/medium mammals (hogs, etc.), amphibians and reptiles			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the wading birds (SSC)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): hog rooting					
Additional relevant factors:					
Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt			Assessment date(s): Entrix - October 2009 thru January 2010, ESI - March 2011		

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

IMPACT

Site/Project Name Progress Energy Florida - Levy Nuclear Plant	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Mixed Wetland Harwood(Logged) - Temporary Impacts
Impact or Mitigation IMPACT	Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt	Assessment date: Entrix - October 2009 thru January 2010, ESI - March 2011

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 water functions	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 4	w/o pres or current - Area is surrounded by pine plantation which provided minimal habitat and limited opportunity for wildlife utilization including foraging, refuge and passage. The AA is with the LNP property which is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north. The LNP property also abuts pine plantation to the east, Goethe State Forest to the north and is situated 8 miles east of the Gulf of Mexico and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau and the Withlacoochee River. with - No loss anticipated from temporary impact. Area to be restored.
.500(6)(b) Water Environment (n/a for uplands) w/o pres or current 6 with 6	w/o pres or current - Moderate hydrology based on disturbed hydroperiods, soils and community structure from years of silviculture practices. No distinct water level indicators. SHW appears at or below grade in some areas and 1-2 feet below historic seasonal high. Evidence of hydrologic stress (i.e., transitional vegetation, moderate pine recruitment and dying trees). with - No loss in hydrologic function anticipated. Area to be restored
.500(6)(c) Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 5 with 4	w/o pres or current - Heavily logged forested wetland characterized by transitional vegetation with less than 50% coverage of trees. Community structure is very disturbed from logging activities with stumps and furrows remaining from thinning activities. Similar species as those found in forested wetlands, although few cypress and hardwood trees remaining and most coverage provided by transitional vegetation in the shrub layer and groundcover including immature slash pine and oaks, sweetgum, fetterbush, wax myrtle, saltbush, gallberry, buttonbush, broomsedge, maidencane, dog fennel, chain fern, red root, and various opportunistic species. Most cypress have been logged and other trees have been logged indiscriminately as a result of thinning activities providing less of a seed source for natural recruitment. Dead trees and hog rooting also prevalent. with - Partial loss in community structure due to time lag of the restoration effort.

Score = sum of above scores/30 (if uplands/20)
current or w/o pres 0.5 with 0.46667

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

For impact assessment areas FL = delta x acres = 0.2367

Delta = [with-current] 0.03333333

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

For mitigation assessment areas RFG = delta/(t-factor x risk) =
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PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name Progress Energy Florida - Levy Nuclear Plant		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Cypress - Clearing Only Impacts	
FLUCFCs code 621		Further classification (optional)		Impact or Mitigation Site? IMPACT	Assessment Area Size (Acres) 1.2
Basin/Watershed Name/Number Waccasassa & Withlacoochee		Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Areas are surrounded by pine plantation and a mosaic of forested wetlands that have been subjected to logging. Wetlands are either directly connected with each other or are interconnected through hydric pine plantation. Furrows serve as conveyances allowing for water to travel along them.</p> <p>Assessment area description High quality cypress swamp dominated by pond cypress intermixed with other canopy species including slash pine, sweet bay, swamp bay, swamp tupelo and red maple. Understory vegetation consists of Virginia willow, dog hobble, dahoon holly, buttonbush, wax myrtle, fetterbush and gallberry. Groundcover species include saw grass, maidencane, lance-leafed arrowhead, pickerel weed, lizard's tail, royal fern, cinnamon fern, Virginia chain fern, red root and broomsedge scattered throughout the understory. Evidence of transitional vegetation, cypress logging (i.e., stumps) and hog rooting in some areas, but good community structure overall.</p>					
<p>Significant nearby features The AA is located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River. The AA abuts a transmission corridor to the west and is surrounded by pine plantation on the LNP property. The LNP property is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north.</p>			<p>Uniqueness (considering the relative rarity in relation to the regional None</p>		
<p>Functions Functions include wildlife feeding and refuge and water quality and storage benefits, although limited by the surrounding silviculture practices.</p>			<p>Mitigation for previous permit/other historic use None</p>		
<p>Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to birds (passerine, raptor and wading birds), small/medium mammals (hogs, etc.), amphibians and reptiles</p>			<p>Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the wading birds (SSC)</p>		
<p>Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): hog rooting</p>					
<p>Additional relevant factors:</p>					
<p>Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt</p>			<p>Assessment date(s): Entrix - October 2009 thru January 2010, ESI - March 2011</p>		

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

IMPACT

Site/Project Name Progress Energy Florida - Levy Nuclear Plant	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Mixed Wetland Harwood - Permanent Impacts
Impact or Mitigation IMPACT	Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt	Assessment date: Entrix - October 2009 thru January 2010, ESI - March 2011

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 with 5 0	w/o pres or current - Area is surrounded by pine plantation which provided minimal habitat and limited opportunity for wildlife utilization including foraging, refuge and passage. The AA is with the LNP property which is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north. The LNP property also abuts pine plantation to the east, Goethe State Forest to the north and is situated 8 miles east of the Gulf of Mexico and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau and the Withlacoochee River.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 6 0	w/o pres or current - Moderate hydrology based on disturbed hydroperiods, soils and community structure from years of silviculture practices. No distinct water level indicators. SHW appears at or below grade in some areas and 1-2 feet below historic seasonal high. Evidence of hydrologic stress (i.e., transitional vegetation, moderate pine recruitment and dying trees).
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 7 0	w/o pres or current - High quality forested wetland dominated by a mixture of hardwoods and conifers including pond cypress, slash pines, swamp tupelo, oaks, red maples, bays and cabbage palms with less coverage of naturally occurring conifer species (i.e., cypress) likely due to logging activities. Community structure is transitional based on the coverage of slash pines and dense shrub layers (i.e., fetterbush) and opportunistic species such as Virginia creeper, dog fennel and greenbrier. Although some pines are naturally occurring, many appear to be recruits from the surrounding land uses. Strong evidence of cypress logging (i.e., stumps) and hog rooting throughout.

Score = sum of above scores/30 (if uplands/20)
current or w/o pres with
0.6 0

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

For impact assessment areas
FL = delta x acres =
2.7000

Delta = [with-current]
0.6

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 Progress Energy Florida - Levy Nuclear Plant		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Cypress - Permanent Impacts	
FLUCFCs code 621		Further classification (optional)		Impact or Mitigation Site? IMPACT	Assessment Area Size (Acres) 31.3
Basin/Watershed Name/Number Waccasassa & Withlacoochee		Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Areas are surrounded by pine plantation and a mosaic of forested wetlands that have been subjected to logging. Wetlands are either directly connected with each other or are interconnected through hydric pine plantation. Furrows serve as conveyances allowing for water to travel along them.</p> <p>Assessment area description High quality cypress swamp dominated by pond cypress intermixed with other canopy species including slash pine, sweet bay, swamp bay, swamp tupelo and red maple. Understory vegetation consists of Virginia willow, dog hobble, dahoon holly, buttonbush, wax myrtle, fetterbush and gallberry. Groundcover species include saw grass, maidencane, lance-leafed arrowhead, pickerel weed, lizard's tail, royal fern, cinnamon fern, Virginia chain fern, red root and broomsedge scattered throughout the understory. Evidence of transitional vegetation, cypress logging (i.e., stumps) and hog rooting in some areas, but good community structure overall.</p>					
<p>Significant nearby features The AA is located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River. The AA abuts a transmission corridor to the west and is surrounded by pine plantation on the LNP property. The LNP property is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north.</p>				<p>Uniqueness (considering the relative rarity in relation to the regional None</p>	
<p>Functions Functions include wildlife feeding and refuge and water quality and storage benefits, although limited by the surrounding silviculture practices.</p>				<p>Mitigation for previous permit/other historic use None</p>	
<p>Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to birds (passerine, raptor and wading birds), small/medium mammals (hogs, etc.), amphibians and reptiles</p>				<p>Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the wading birds (SSC)</p>	
<p>Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): hog rooting</p>					
<p>Additional relevant factors:</p>					
<p>Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt</p>				<p>Assessment date(s): Entrix - October 2009 thru January 2010, ESI - March 2011</p>	

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

IMPACT

Site/Project Name Progress Energy Florida - Levy Nuclear Plant	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Cypress - Permanent Impacts
Impact or Mitigation IMPACT	Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt	Assessment date: Entrix - October 2009 thru January 2010, ESI - March 2011

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 water functions	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 4 0	w/o pres or current - Area is surrounded by pine plantation which provided minimal habitat and limited opportunity for wildlife utilization including foraging, refuge and passage. The AA is with the LNP property which is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north. The LNP property also abuts pine plantation to the east, Goethe State Forest to the north and is situated 8 miles east of the Gulf of Mexico and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau and the Withlacoochee River.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 6 0	w/o pres or current - No standing water in most areas, but water level indicators, hydric soils and community structure suggest moderate/good hydrology. Some wetlands still have evidence of hydrologic stress from silviculture based on transitional vegetation, pine coverage and dying trees.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 7 0	w/o pres or current -High quality cypress swamp dominated by pond cypress intermixed with other canopy species including slash pine, sweet bay, swamp bay, swamp tupelo and red maple. Understory vegetation consists of Virginia willow, dog hobble, dahoon holly, buttonbush, wax myrtle, fetterbush and gallberry. Groundcover species include saw grass, maidencane, lance-leaved arrowhead, pickerel weed, lizard's tail, royal fern, cinnamon fern, Virginia chain fern, red root and broomsedge scattered throughout the understory. Evidence of transitional vegetation, cypress logging (i.e., stumps) and hog rooting in some areas, but good community structure overall.

Score = sum of above scores/30 (if uplands/20)
current
or w/o pres with
0.56667 0

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

For impact assessment areas
FL = delta x acres =
17.7367

Delta = [with-current]
0.56666667

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 Progress Energy Florida - Levy Nuclear Plant		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Cypress - Temporary Impacts	
FLUCFCs code 621		Further classification (optional)		Impact or Mitigation Site? IMPACT	Assessment Area Size (Acres) 9
Basin/Watershed Name/Number Waccasassa & Withlacoochee		Affected Waterbody (Class) Class III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Areas are surrounded by pine plantation and a mosaic of forested wetlands that have been subjected to logging. Wetlands are either directly connected with each other or are interconnected through hydric pine plantation. Furrows serve as conveyances allowing for water to travel along them.</p>					
<p>Assessment area description</p> <p>High quality cypress swamp dominated by pond cypress intermixed with other canopy species including slash pine, sweet bay, swamp bay, swamp tupelo and red maple. Understory vegetation consists of Virginia willow, dog hobble, dahoon holly, buttonbush, wax myrtle, fetterbush and gallberry. Groundcover species include saw grass, maidencane, lance-leaved arrowhead, pickerel weed, lizard's tail, royal fern, cinnamon fern, Virginia chain fern, red root and broomsedge scattered throughout the understory. Evidence of transitional vegetation, cypress logging (i.e., stumps) and hog rooting in some areas, but good community structure overall.</p>					
<p>Significant nearby features</p> <p>The AA is located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River. The AA abuts a transmission corridor to the west and is surrounded by pine plantation on the LNP property. The LNP property is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north.</p>				<p>Uniqueness (considering the relative rarity in relation to the regional</p> <p align="center">None</p>	
<p>Functions</p> <p>Functions include wildlife feeding and refuge and water quality and storage benefits, although limited by the surrounding silviculture practices.</p>				<p>Mitigation for previous permit/other historic use</p> <p align="center">None</p>	
<p>Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected</p> <p>birds (passerine, raptor and wading birds), small/medium mammals (hogs, etc.), amphibians and reptiles</p>				<p>Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the</p> <p align="center">wading birds (SSC)</p>	
<p>Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):</p> <p align="center">hog rooting</p>					
<p>Additional relevant factors:</p>					
<p>Assessment conducted by:</p> <p>Entrix - VAF/DDS, ESI - Gary Howalt</p>				<p>Assessment date(s):</p> <p>Entrix - October 2009 thru January 2010, ESI - March 2011</p>	

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

IMPACT

Site/Project Name Progress Energy Florida - Levy Nuclear Plant	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Cypress - Temporary Impacts
Impact or Mitigation IMPACT	Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt	Assessment date: Entrix - October 2009 thru January 2010, ESI - March 2011

Scoring Guidance The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed
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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 water functions	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 4 with 4	w/o pres or current - Area is surrounded by pine plantation which provided minimal habitat and limited opportunity for wildlife utilization including foraging, refuge and passage. The AA is with the LNP property which is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north. The LNP property also abuts pine plantation to the east, Goethe State Forest to the north and is situated 8 miles east of the Gulf of Mexico and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau and the Withlacoochee River. with - No loss anticipated from temporary impact. Area to be restored.
.500(6)(b) Water Environment (n/a for uplands) w/o pres or current 6 with 6	w/o pres or current - No standing water in most areas, but water level indicators, hydric soils and community structure suggest moderate/good hydrology. Some wetlands still have evidence of hydrologic stress from silviculture based on transitional vegetation, pine coverage and dying trees. with - No loss in hydrologic function anticipated. Area to be restored.
.500(6)(c) Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 7 with 6	w/o pres or current -High quality cypress swamp dominated by pond cypress intermixed with other canopy species including slash pine, sweet bay, swamp bay, swamp tupelo and red maple. Understory vegetation consists of Virginia willow, dog hobble, dahoon holly, buttonbush, wax myrtle, fetterbush and gallberry. Groundcover species include saw grass, maidencane, lance-leafed arrowhead, pickerel weed, lizard's tail, royal fern, cinnamon fern, Virginia chain fern, red root and broomsedge scattered throughout the understory. Evidence of transitional vegetation, cypress logging (i.e., stumps) and hog rooting in some areas, but good community structure overall. with - Partial loss in community structure due to time lag from restoration effort.

Score = sum of above scores/30 (if uplands/20)
current or w/o pres 0.56667 with 0.53333

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

For impact assessment areas
FL = delta x acres = 0.3000

Delta = [with-current]
0.03333333

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 Progress Energy Florida - Levy Nuclear Plant		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Cypress (Logged)- Clearing Only Impacts	
FLUCFCs code 621-1		Further classification (optional)		Impact or Mitigation Site? IMPACT	Assessment Area Size (Acres) 30.8
Basin/Watershed Name/Number Waccasassa & Withlacoochee		Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Areas are surrounded by pine plantation and a mosaic of forested wetlands that have been subjected to logging. Wetlands are either directly connected with each other or are interconnected through hydric pine plantation. Furrows serve as conveyances allowing for water to travel along them.</p> <p>Assessment area description Heavily logged cypress swamp characterized by transitional vegetation with less than 30% coverage of trees. Community structure is very disturbed from logging activities with stumps and furrows remaining from thinning activities. Similar species composition as those found in cypress swamps, although few cypress remaining (little seed source) and most coverage provided by transitional vegetation in the shrub layer and groundcover including immature slash pine and oaks, sweetgum, fetterbush, wax myrtle, saltbush, gallberry, buttonbush, broomsedge, maidencane, dog fennel, chain fern, red root, and various opportunistic species . Dead trees and hog rooting also prevalent.</p>					
<p>Significant nearby features The AA is located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River. The AA abuts a transmission corridor to the west and is surrounded by pine plantation on the LNP property. The LNP property is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north.</p>			<p>Uniqueness (considering the relative rarity in relation to the regional None</p>		
<p>Functions Functions include wildlife feeding and refuge and water quality and storage benefits, although limited by the surrounding silviculture practices.</p>			<p>Mitigation for previous permit/other historic use None</p>		
<p>Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to birds (passerine, raptor and wading birds), small/medium mammals (hogs, etc.), amphibians and reptiles</p>			<p>Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the wading birds (SSC)</p>		
<p>Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): hog rooting</p>					
<p>Additional relevant factors:</p>					
<p>Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt</p>			<p>Assessment date(s): Entrix - October 2009 thru January 2010, ESI - March 2011</p>		

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

IMPACT

Site/Project Name Progress Energy Florida - Levy Nuclear Plant	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Cypress (Logged)- Clearing Only Impacts
Impact or Mitigation IMPACT	Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt	Assessment date: Entrix - October 2009 thru January 2010, ESI - March 2011

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 water functions	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 4	w/o pres or current - Area is surrounded by pine plantation which provided minimal habitat and limited opportunity for wildlife utilization including foraging, refuge and passage. The AA is with the LNP property which is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north. The LNP property also abuts pine plantation to the east, Goethe State Forest to the north and is situated 8 miles east of the Gulf of Mexico and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau and the Withlacoochee River. with - No loss anticipated from clearing only.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current 6 with 6	w/o pres or current - No standing water in most areas, but water level indicators, hydric soils and community structure suggest moderate/good hydrology. Some wetlands still have evidence of hydrologic stress from silviculture based on transitional vegetation, pine coverage and dying trees. with - No loss in hydrologic function anticipated.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 5 with 3	w/o pres or current -Heavily logged cypress swamp characterized by transitional vegetation with less than 30% coverage of trees. Community structure is very disturbed from logging activities with stumps and furrows remaining from thinning activities. Similar species composition as those found in cypress swamps, although few cypress remaining (little seed source) and most coverage provided by transitional vegetation in the shrub layer and groundcover including immature slash pine and oaks, sweetgum, fetterbush, wax myrtle, saltbush, gallberry, buttonbush, broomsedge, maidencane, dog fennel, chain fern, red root, and various opportunistic species. Dead trees and hog rooting also prevalent. with - Partial loss in community structure due to conversion from forested wetland to herbaceous system.

Score = sum of above scores/30 (if uplands/20)
current or w/o pres 0.5 with 0.43333

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

For impact assessment areas
FL = delta x acres = 2.0533

Delta = [with-current]
0.06666667

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 Progress Energy Florida - Levy Nuclear Plant		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Cypress (Logged) - Permanent Impacts	
FLUCFCs code 621-1		Further classification (optional)		Impact or Mitigation Site? IMPACT	Assessment Area Size (Acres) 73.5
Basin/Watershed Name/Number Waccasassa & Withlacoochee		Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Areas are surrounded by pine plantation and a mosaic of forested wetlands that have been subjected to logging. Wetlands are either directly connected with each other or are interconnected through hydric pine plantation. Furrows serve as conveyances allowing for water to travel along them.</p> <p>Assessment area description Heavily logged cypress swamp characterized by transitional vegetation with less than 30% coverage of trees. Community structure is very disturbed from logging activities with stumps and furrows remaining from thinning activities. Similar species composition as those found in cypress swamps, although few cypress remaining (little seed source) and most coverage provided by transitional vegetation in the shrub layer and groundcover including immature slash pine and oaks, sweetgum, fetterbush, wax myrtle, saltbush, gallberry, buttonbush, broomsedge, maidencane, dog fennel, chain fern, red root, and various opportunistic species . Dead trees and hog rooting also prevalent.</p>					
<p>Significant nearby features The AA is located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River. The AA abuts a transmission corridor to the west and is surrounded by pine plantation on the LNP property. The LNP property is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north.</p>				<p>Uniqueness (considering the relative rarity in relation to the regional)</p> <p align="center">None</p>	
<p>Functions Functions include wildlife feeding and refuge and water quality and storage benefits, although limited by the surrounding silviculture practices.</p>				<p>Mitigation for previous permit/other historic use</p> <p align="center">None</p>	
<p>Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to)</p> <p>birds (passerine, raptor and wading birds), small/medium mammals (hogs, etc.), amphibians and reptiles</p>				<p>Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the)</p> <p align="center">wading birds (SSC)</p>	
<p>Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):</p> <p align="center">hog rooting</p>					
<p>Additional relevant factors:</p>					
<p>Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt</p>				<p>Assessment date(s): Entrix - October 2009 thru January 2010, ESI - March 2011</p>	

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

IMPACT

Site/Project Name Progress Energy Florida - Levy Nuclear Plant	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Cypress (Logged) - Permanent Impacts
Impact or Mitigation IMPACT	Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt	Assessment date: Entrix - October 2009 thru January 2010, ESI - March 2011

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 water functions	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	w/o pres or current - Area is surrounded by pine plantation which provided minimal habitat and limited opportunity for wildlife utilization including foraging, refuge and passage. The AA is with the LNP property which is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north. The LNP property also abuts pine plantation to the east, Goethe State Forest to the north and is situated 8 miles east of the Gulf of Mexico and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau and the Withlacoochee River. with -
.500(6)(b) Water Environment (n/a for uplands) w/o pres or current 6 with 0	w/o pres or current - No standing water in most areas, but water level indicators, hydric soils and community structure suggest moderate/good hydrology. Some wetlands still have evidence of hydrologic stress from silviculture based on transitional vegetation, pine coverage and dying trees. with -
.500(6)(c) Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 5 with 0	w/o pres or current -Heavily logged cypress swamp characterized by transitional vegetation with less than 30% coverage of trees. Community structure is very disturbed from logging activities with stumps and furrows remaining from thinning activities. Similar species composition as those found in cypress swamps, although few cypress remaining (little seed source) and most coverage provided by transitional vegetation in the shrub layer and groundcover including immature slash pine and oaks, sweetgum, fetterbush, wax myrtle, saltbush, gallberry, buttonbush, broomsedge, maidencane, dog fennel, chain fern, red root, and various opportunistic species. Dead trees and hog rooting also prevalent. with -

Score = sum of above scores/30 (if uplands/20)
current or w/o pres 0.5 with 0

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

For impact assessment areas
FL = delta x acres = 36.7500

Delta = [with-current]
0.5

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 Progress Energy Florida - Levy Nuclear Plant		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Cypress (Logged) - Temporary Impacts	
FLUCFCs code 621-1		Further classification (optional)		Impact or Mitigation Site? IMPACT	Assessment Area Size (Acres) 7.5
Basin/Watershed Name/Number Waccasassa & Withlacoochee		Affected Waterbody (Class) Class III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Areas are surrounded by pine plantation and a mosaic of forested wetlands that have been subjected to logging. Wetlands are either directly connected with each other or are interconnected through hydric pine plantation. Furrows serve as conveyances allowing for water to travel along them.</p>					
<p>Assessment area description</p> <p>Heavily logged cypress swamp characterized by transitional vegetation with less than 30% coverage of trees. Community structure is very disturbed from logging activities with stumps and furrows remaining from thinning activities. Similar species composition as those found in cypress swamps, although few cypress remaining (little seed source) and most coverage provided by transitional vegetation in the shrub layer and groundcover including immature slash pine and oaks, sweetgum, fetterbush, wax myrtle, saltbush, gallberry, buttonbush, broomsedge, maidencane, dog fennel, chain fern, red root, and various opportunistic species. Dead trees and hog rooting also prevalent.</p>					
<p>Significant nearby features</p> <p>The AA is located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River. The AA abuts a transmission corridor to the west and is surrounded by pine plantation on the LNP property. The LNP property is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north.</p>			<p>Uniqueness (considering the relative rarity in relation to the regional</p> <p align="center">None</p>		
<p>Functions</p> <p>Functions include wildlife feeding and refuge and water quality and storage benefits, although limited by the surrounding silviculture practices.</p>			<p>Mitigation for previous permit/other historic use</p> <p align="center">None</p>		
<p>Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected</p> <p>birds (passerine, raptor and wading birds), small/medium mammals (hogs, etc.), amphibians and reptiles</p>			<p>Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the</p> <p align="center">wading birds (SSC)</p>		
<p>Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):</p> <p align="center">hog rooting</p>					
<p>Additional relevant factors:</p>					
<p>Assessment conducted by:</p> <p>Entrix - VAF/DDS, ESI - Gary Howalt</p>			<p>Assessment date(s):</p> <p>Entrix - October 2009 thru January 2010, ESI - March 2011</p>		

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

IMPACT

Site/Project Name Progress Energy Florida - Levy Nuclear Plant	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Cypress (Logged) - Temporary Impacts
Impact or Mitigation IMPACT	Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt	Assessment date: Entrix - October 2009 thru January 2010, ESI - March 2011

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 water functions	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 4	w/o pres or current - Area is surrounded by pine plantation which provided minimal habitat and limited opportunity for wildlife utilization including foraging, refuge and passage. The AA is with the LNP property which is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north. The LNP property also abuts pine plantation to the east, Goethe State Forest to the north and is situated 8 miles east of the Gulf of Mexico and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau and the Withlacoochee River. with - No loss anticipated from temporary impacts.
.500(6)(b) Water Environment (n/a for uplands) w/o pres or current 6 with 6	w/o pres or current - No standing water in most areas, but water level indicators, hydric soils and community structure suggest moderate/good hydrology. Some wetlands still have evidence of hydrologic stress from silviculture based on transitional vegetation, pine coverage and dying trees. with - No loss in hydrologic function anticipated.
.500(6)(c) Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 5 with 4	w/o pres or current -Heavily logged cypress swamp characterized by transitional vegetation with less than 30% coverage of trees. Community structure is very disturbed from logging activities with stumps and furrows remaining from thinning activities. Similar species composition as those found in cypress swamps, although few cypress remaining (little seed source) and most coverage provided by transitional vegetation in the shrub layer and groundcover including immature slash pine and oaks, sweetgum, fetterbush, wax myrtle, saltbush, gallberry, buttonbush, broomsedge, maidencane, dog fennel, chain fern, red root, and various opportunistic species. Dead trees and hog rooting also prevalent. with - Partial loss in community structure due to time lag from restoration effort.

Score = sum of above scores/30 (if uplands/20)
current or w/o pres 0.5 with 0.46667

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

For impact assessment areas
FL = delta x acres = 0.2500

Delta = [with-current]
0.03333333

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 Progress Energy Florida - Levy Nuclear Plant		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Wet Planted Pine - Clearing Only Impacts	
FLUCFCs code 629		Further classification (optional)		Impact or Mitigation Site? IMPACT	Assessment Area Size (Acres) 11.5
Basin/Watershed Name/Number Waccasassa & Withlacoochee		Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Areas are surrounded by pine plantation and a mosaic of forested wetlands that have been subjected to logging. Wetlands are either directly connected with each other or are interconnected through hydric pine plantation. Furrows serve as conveyances allowing for water to travel along them.</p> <p>Assessment area description Hydric planted pine area surrounded by pine plantation and subject to routine logging activities. Community structure varies throughout these areas, but generally consists of planted pine (predom. slash pine), bedded and furrowed, with occasional shrubs and wet prairie/marsh species growing in the furrows and at interface of wetlands including wax myrtle, saltbush, fetterbush, buttonbush, redroot, Virginia chain fern, maidencane, sedges, yellow-eyed grass, beakrush, broomsedge and soft rush. Some areas have no structure and are completely devoid of vegetation other than pines, while other areas are highly overgrown and show signs of fire suppression. Areas provide minimal wildlife habitat and also show evidence of hog rooting.</p>					
Significant nearby features The AA is located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River. The AA abuts a transmission corridor to the west and is surrounded by pine plantation on the LNP property. The LNP property is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north.			Uniqueness (considering the relative rarity in relation to the regional None		
Functions Functions include wildlife feeding and refuge and water quality and storage benefits, although limited by the surrounding silviculture practices.			Mitigation for previous permit/other historic use None		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to birds (passerine, raptor and wading birds), small/medium mammals (hogs, etc.), amphibians and reptiles			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the wading birds (SSC)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): hog rooting					
Additional relevant factors:					
Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt			Assessment date(s): Entrix - October 2009 thru January 2010, ESI - March 2011		

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

IMPACT

Site/Project Name Progress Energy Florida - Levy Nuclear Plant	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Wet Planted Pine - Clearing Only Impacts
Impact or Mitigation IMPACT	Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt	Assessment date: Entrix - October 2009 thru January 2010, ESI - March 2011

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 water functions	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 5 with 5	w/o pres or current - Area is surrounded by pine plantation which provided minimal habitat and limited opportunity for wildlife utilization including foraging, refuge and passage. The AA is with the LNP property which is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north. The LNP property also abuts pine plantation to the east, Goethe State Forest to the north and is situated 8 miles east of the Gulf of Mexico and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau and the Withlacoochee River. with - No loss anticipated from clearing only.
.500(6)(b) Water Environment (n/a for uplands) w/o pres or current 4 with 4	w/o pres or current - No standing water in most areas, but water level indicators, hydric soils and community structure suggest moderate/good hydrology. Some wetlands still have evidence of hydrologic stress from silviculture based on transitional vegetation, pine coverage and dying trees. with - No loss in hydrologic function anticipated.
.500(6)(c) Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 4 with 2	w/o pres or current -Hydric planted pine area surrounded by pine plantation and subject to routine logging activities. Community structure varies throughout these areas, but generally consists of planted pine (predom. slash pine), bedded and furrowed, with occasional shrubs and wet prairie/marsh species growing in the furrows and at interface of wetlands including wax myrtle, saltbush, fetterbush, buttonbush, redroot, Virginia chain fern, maidencane, sedges, yellow-eyed grass, beakrush, broomsedge and soft rush. Some areas have no structure and are completely devoid of vegetation other than pines, while other areas are highly overgrown and show signs of fire suppression. Areas provide minimal wildlife habitat and also show evidence of hog rooting. with - Partial loss in community structure due to conversion from forested wetland to herbaceous system.

Score = sum of above scores/30 (if uplands/20)	
current or w/o pres 0.43333 with 0.36667	

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

For impact assessment areas	
FL = delta x acres =	0.7667

Delta = [with-current]	
0.06666667	

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 Progress Energy Florida - Levy Nuclear Plant		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Wet Planted Pine - Permanent Impacts	
FLUCFCs code 629		Further classification (optional)		Impact or Mitigation Site? IMPACT	Assessment Area Size (Acres) 135.2
Basin/Watershed Name/Number Waccasassa & Withlacoochee		Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Areas are surrounded by pine plantation and a mosaic of forested wetlands that have been subjected to logging. Wetlands are either directly connected with each other or are interconnected through hydric pine plantation. Furrows serve as conveyances allowing for water to travel along them.</p> <p>Assessment area description</p> <p>Hydric planted pine area surrounded by pine plantation and subject to routine logging activities. Community structure varies throughout these areas, but generally consists of planted pine (predom. slash pine), bedded and furrowed, with occasional shrubs and wet prairie/marsh species growing in the furrows and at interface of wetlands including wax myrtle, saltbush, fetterbush, buttonbush, redroot, Virginia chain fern, maidencane, sedges, yellow-eyed grass, beakrush, broomsedge and soft rush. Some areas have no structure and are completely devoid of vegetation other than pines, while other areas are highly overgrown and show signs of fire suppression. Areas provide minimal wildlife habitat and also show evidence of hog rooting.</p>					
Significant nearby features The AA is located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River. The AA abuts a transmission corridor to the west and is surrounded by pine plantation on the LNP property. The LNP property is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north.			Uniqueness (considering the relative rarity in relation to the regional None		
Functions Functions include wildlife feeding and refuge and water quality and storage benefits, although limited by the surrounding silviculture practices.			Mitigation for previous permit/other historic use None		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to birds (passerine, raptor and wading birds), small/medium mammals (hogs, etc.), amphibians and reptiles			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the wading birds (SSC)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): hog rooting					
Additional relevant factors:					
Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt			Assessment date(s): Entrix - October 2009 thru January 2010, ESI - March 2011		

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

IMPACT

Site/Project Name Progress Energy Florida - Levy Nuclear Plant	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Wet Planted Pine - Permanent Impacts
Impact or Mitigation IMPACT	Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt	Assessment date: Entrix - October 2009 thru January 2010, ESI - March 2011

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 water functions	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 5 with 0	w/o pres or current - Area is surrounded by pine plantation which provided minimal habitat and limited opportunity for wildlife utilization including foraging, refuge and passage. The AA is with the LNP property which is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north. The LNP property also abuts pine plantation to the east, Goethe State Forest to the north and is situated 8 miles east of the Gulf of Mexico and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau and the Withlacoochee River. with -
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current 4 with 0	w/o pres or current - No standing water in most areas, but water level indicators, hydric soils and community structure suggest moderate/good hydrology. Some wetlands still have evidence of hydrologic stress from silviculture based on transitional vegetation, pine coverage and dying trees. with -
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 4 with 0	w/o pres or current -Hydric planted pine area surrounded by pine plantation and subject to routine logging activities. Community structure varies throughout these areas, but generally consists of planted pine (predom. slash pine), bedded and furrowed, with occasional shrubs and wet prairie/marsh species growing in the furrows and at interface of wetlands including wax myrtle, saltbush, fetterbush, buttonbush, redroot, Virginia chain fern, maidencane, sedges, yellow-eyed grass, beakrush, broomsedge and soft rush. Some areas have no structure and are completely devoid of vegetation other than pines, while other areas are highly overgrown and show signs of fire suppression. Areas provide minimal wildlife habitat and also show evidence of hog rooting. with -

Score = sum of above scores/30 (if uplands/20)	
current or w/o pres	with
0.43333	0

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

For impact assessment areas	
FL = delta x acres =	58.5867

Delta = [with-current]
0.433333333

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 Progress Energy Florida - Levy Nuclear Plant		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Wet Planted Pine - Temporary Impacts	
FLUCFCs code 629		Further classification (optional)		Impact or Mitigation Site? IMPACT	
				Assessment Area Size (Acres) 26.2	
Basin/Watershed Name/Number Waccasassa & Withlacoochee		Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Areas are surrounded by pine plantation and a mosaic of forested wetlands that have been subjected to logging. Wetlands are either directly connected with each other or are interconnected through hydric pine plantation. Furrows serve as conveyances allowing for water to travel along them.</p> <p>Assessment area description Hydric planted pine area surrounded by pine plantation and subject to routine logging activities. Community structure varies throughout these areas, but generally consists of planted pine (predom. slash pine), bedded and furrowed, with occasional shrubs and wet prairie/marsh species growing in the furrows and at interface of wetlands including wax myrtle, saltbush, fetterbush, buttonbush, redroot, Virginia chain fern, maidencane, sedges, yellow-eyed grass, beakrush, broomsedge and soft rush. Some areas have no structure and are completely devoid of vegetation other than pines, while other areas are highly overgrown and show signs of fire suppression. Areas provide minimal wildlife habitat and also show evidence of hog rooting.</p>					
Significant nearby features The AA is located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River. The AA abuts a transmission corridor to the west and is surrounded by pine plantation on the LNP property. The LNP property is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north.			Uniqueness (considering the relative rarity in relation to the regional None		
Functions Functions include wildlife feeding and refuge and water quality and storage benefits, although limited by the surrounding silviculture practices.			Mitigation for previous permit/other historic use None		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected birds (passerine, raptor and wading birds), small/medium mammals (hogs, etc.), amphibians and reptiles			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the wading birds (SSC)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): hog rooting					
Additional relevant factors:					
Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt			Assessment date(s): Entrix - October 2009 thru January 2010, ESI - March 2011		

PART II – Quantification of Assessment Area

w/o pres or current - Area is surrounded by pine plantation which provided minimal habitat and limited opportunity

IMPACT

Site/Project Name Progress Energy Florida - Levy Nuclear Plant	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Wet Planted Pine - Temporary Impacts
Impact or Mitigation IMPACT	Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt	Assessment date: Entrix - October 2009 thru January 2010, ESI - March 2011

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

<p>.500(6)(a) Location and Landscape Support</p> <p>w/o pres or current with</p> <p>5 5</p>	<p>w/o pres or current - Area is surrounded by pine plantation which provided minimal habitat and limited opportunity for wildlife utilization including foraging, refuge and passage. The AA is with the LNP property which is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north. The LNP property also abuts pine plantation to the east, Goethe State Forest to the north and is situated 8 miles east of the Gulf of Mexico and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau and the Withlacoochee River.</p> <p>with - No loss anticipated from temporary impacts.</p>
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>w/o pres or current with</p> <p>4 4</p>	<p>w/o pres or current - No standing water in most areas, but water level indicators, hydric soils and community structure suggest moderate/good hydrology. Some wetlands still have evidence of hydrologic stress from silviculture based on transitional vegetation, pine coverage and dying trees.</p> <p>with - No loss in hydrologic function anticipated.</p>
<p>.500(6)(c)Community structure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current with</p> <p>4 3</p>	<p>w/o pres or current -Hydric planted pine area surrounded by pine plantation and subject to routine logging activities. Community structure varies throughout these areas, but generally consists of planted pine (predom. slash pine), bedded and furrowed, with occasional shrubs and wet prairie/marsh species growing in the furrows and at interface of wetlands including wax myrtle, saltbush, fetterbush, buttonbush, redroot, Virginia chain fern, maidencane, sedges, yellow-eyed grass, beakrush, broomsedge and soft rush. Some areas have no structure and are completely devoid of vegetation other than pines, while other areas are highly overgrown and show signs of fire suppression. Areas provide minimal wildlife habitat and also show evidence of hog rooting.</p> <p>with - Partial loss in community structure due to time lag from restoration effort.</p>

Score = sum of above scores/30 (if uplands/20)	
current	with
0.43333	0.4

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

For impact assessment areas	
FL = delta x acres =	0.8733

Delta = [with-current]
0.03333333

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 Progress Energy Florida - Levy Nuclear Plant		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Wetland Forested Mixed - Clearing Only Impacts	
FLUCFCs code 630		Further classification (optional)		Impact or Mitigation Site? IMPACT	
				Assessment Area Size (Acres) 46.9	
Basin/Watershed Name/Number Waccasassa & Withlacoochee		Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Areas are surrounded by pine plantation and a mosaic of forested wetlands that have been subjected to logging. Wetlands are either directly connected with each other or are interconnected through hydric pine plantation. Furrows serve as conveyances allowing for water to travel along them.</p>					
<p>Assessment area description</p> <p>This forested community is dominated by a mixture of hardwoods and conifers in the canopy including pond cypress, slash pines, swamp tupelo, oaks, red maple, bays, and cabbage palms. The understory consists of Virginia willow, dahoon holly, hackberry, sweet gum, loblolly bay, gallberry, fetterbush, saltbush, buttonbush, wax myrtle, titi, pop ash, persimmon and yaupon holly. Groundcover consists of sedges, bushy bluestem, broomsedge, redroot, iris, beakrush, soft rush, chain fern, sawgrass, sand cordgrass, cinnamon fern, and various opportunistic species. Community structure is transitioning based on the coverage of slash pines and dense shrub layers (i.e., fetterbush) and opportunistic species such as Virginia creeper, dog fennel and greenbrier. Strong evidence of cypress logging (i.e., stumps) and hog rooting throughout.</p>					
<p>Significant nearby features</p> <p>The AA is located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River. The AA abuts a transmission corridor to the west and is surrounded by pine plantation on the LNP property. The LNP property is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north.</p>				<p>Uniqueness (considering the relative rarity in relation to the regional</p> <p align="center">None</p>	
<p>Functions</p> <p>Functions include wildlife feeding and refuge and water quality and storage benefits, although limited by the surrounding silviculture practices.</p>				<p>Mitigation for previous permit/other historic use</p> <p align="center">None</p>	
<p>Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to</p> <p>birds (passerine, raptor and wading birds), small/medium mammals (hogs, etc.), amphibians and reptiles</p>				<p>Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the</p> <p align="center">wading birds (SSC)</p>	
<p>Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):</p> <p align="center">hog rooting</p>					
<p>Additional relevant factors:</p>					
<p>Assessment conducted by:</p> <p>Entrix - VAF/DDS, ESI - Gary Howalt</p>				<p>Assessment date(s):</p> <p>Entrix - October 2009 thru January 2010, ESI - March 2011</p>	

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

IMPACT

Site/Project Name Progress Energy Florida - Levy Nuclear Plant	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Wetland Forested Mixed - Clearing Only Impacts
Impact or Mitigation IMPACT	Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt	Assessment date: Entrix - October 2009 thru January 2010, ESI - March 2011

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 water functions	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 5 with 5	w/o pres or current - Area is surrounded by pine plantation which provided minimal habitat and limited opportunity for wildlife utilization including foraging, refuge and passage. The AA is with the LNP property which is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north. The LNP property also abuts pine plantation to the east, Goethe State Forest to the north and is situated 8 miles east of the Gulf of Mexico and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau and the Withlacoochee River. with - No loss anticipated from clearing only.
.500(6)(b) Water Environment (n/a for uplands) w/o pres or current 7 with 7	w/o pres or current - No standing water in most areas, but water level indicators, hydric soils and community structure suggest moderate/good hydrology. Some wetlands still have evidence of hydrologic stress from silviculture based on transitional vegetation, pine coverage and dying trees. with - No loss in hydrologic function anticipated.
.500(6)(c) Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 8 with 5	w/o pres or current - This forested community is dominated by a mixture of hardwoods and conifers in the canopy including pond cypress, slash pines, swamp tupelo, oaks, red maple, bays, and cabbage palms. The understory consists of Virginia willow, dahoon holly, hackberry, sweet gum, loblolly bay, gallberry, fetterbush, saltbush, buttonbush, wax myrtle, titi, pop ash, persimmon and yaupon holly. Groundcover consists of sedges, bushy bluestem, broomsedge, redroot, iris, beakrush, soft rush, chain fern, sawgrass, sand cordgrass, cinnamon fern, and various opportunistic species. Community structure is transitioning based on the coverage of slash pines and dense shrub layers (i.e., fetterbush) and opportunistic species such as Virginia creeper, dog fennel and greenbrier. Strong evidence of cypress logging (i.e., stumps) and hog rooting throughout. with - Partial loss in community structure due to conversion from forested wetland to herbaceous system.

Score = sum of above scores/30 (if uplands/20)	
current or w/o pres 0.66667 with 0.56667	

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

For impact assessment areas	
FL = delta x acres =	4.6900

Delta = [with-current]	
0.1	

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 Progress Energy Florida - Levy Nuclear Plant		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Wetland Forested Mixed - Permanent Impacts	
FLUCFCs code 630		Further classification (optional)		Impact or Mitigation Site? IMPACT	
				Assessment Area Size (Acres) 43.3	
Basin/Watershed Name/Number Waccasassa, Withlacoochee & Upper Coastal		Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Areas are surrounded by pine plantation and a mosaic of forested wetlands that have been subjected to logging. Wetlands are either directly connected with each other or are interconnected through hydric pine plantation. Furrows serve as conveyances allowing for water to travel along them.</p>					
<p>Assessment area description</p> <p>This forested community is dominated by a mixture of hardwoods and conifers in the canopy including pond cypress, slash pines, swamp tupelo, oaks, red maple, bays, and cabbage palms. The understory consists of Virginia willow, dahoon holly, hackberry, sweet gum, loblolly bay, gallberry, fetterbush, saltbush, buttonbush, wax myrtle, titi, pop ash, persimmon and yaupon holly. Groundcover consists of sedges, bushy bluestem, broomsedge, redroot, iris, beakrush, soft rush, chain fern, sawgrass, sand cordgrass, cinnamon fern, and various opportunistic species. Community structure is transitioning based on the coverage of slash pines and dense shrub layers (i.e., fetterbush) and opportunistic species such as Virginia creeper, dog fennel and greenbrier. Strong evidence of cypress logging (i.e., stumps) and hog rooting throughout.</p>					
<p>Significant nearby features</p> <p>The AA is located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River. The AA abuts a transmission corridor to the west and is surrounded by pine plantation on the LNP property. The LNP property is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north.</p>				<p>Uniqueness (considering the relative rarity in relation to the regional</p> <p align="center">None</p>	
<p>Functions</p> <p>Functions include wildlife feeding and refuge and water quality and storage benefits, although limited by the surrounding silviculture practices.</p>				<p>Mitigation for previous permit/other historic use</p> <p align="center">None</p>	
<p>Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to</p> <p>birds (passerine, raptor and wading birds), small/medium mammals (hogs, etc.), amphibians and reptiles</p>				<p>Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the</p> <p align="center">wading birds (SSC)</p>	
<p>Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):</p> <p align="center">hog rooting</p>					
<p>Additional relevant factors:</p>					
<p>Assessment conducted by:</p> <p>Entrix - VAF/DDS, ESI - Gary Howalt</p>				<p>Assessment date(s):</p> <p>Entrix - October 2009 thru January 2010, ESI - March 2011</p>	

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

IMPACT

Site/Project Name Progress Energy Florida - Levy Nuclear Plant	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Wetland Forested Mixed - Permanent Impacts
Impact or Mitigation IMPACT	Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt	Assessment date: Entrix - October 2009 thru January 2010, ESI - March 2011

Scoring Guidance The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed
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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 water functions	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 5 with 0	w/o pres or current - Area is surrounded by pine plantation which provided minimal habitat and limited opportunity for wildlife utilization including foraging, refuge and passage. The AA is with the LNP property which is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north. The LNP property also abuts pine plantation to the east, Goethe State Forest to the north and is situated 8 miles east of the Gulf of Mexico and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau and the Withlacoochee River. with -
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current 7 with 0	w/o pres or current - No standing water in most areas, but water level indicators, hydric soils and community structure suggest moderate/good hydrology. Some wetlands still have evidence of hydrologic stress from silviculture based on transitional vegetation, pine coverage and dying trees. with -
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 8 with 0	w/o pres or current -This forested community is dominated by a mixture of hardwoods and conifers in the canopy including pond cypress, slash pines, swamp tupelo, oaks, red maple, bays, and cabbage palms. The understory consists of Virginia willow, dahoon holly, hackberry, sweet gum, loblolly bay, gallberry, fetterbush, saltbush, buttonbush, wax myrtle, titi, pop ash, persimmon and yaupon holly. Groundcover consists of sedges, bushy bluestem, broomsedge, redroot, iris, beakrush, soft rush, chain fern, sawgrass, sand cordgrass, cinnamon fern, and various opportunistic species. Community structure is transitioning based on the coverage of slash pines and dense shrub layers (i.e., fetterbush) and opportunistic species such as Virginia creeper, dog fennel and greenbrier. Strong evidence of cypress logging (i.e., stumps) and hog rooting throughout. with -

Score = sum of above scores/30 (if uplands/20)
current or w/o pres 0.66667 with 0

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

For impact assessment areas
FL = delta x acres = 28.8667

Delta = [with-current]
0.66666667

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 Progress Energy Florida - Levy Nuclear Plant		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Wetland Forested Mixed - Temporary Impacts	
FLUCFCs code 630		Further classification (optional)		Impact or Mitigation Site? IMPACT	
				Assessment Area Size (Acres) 9	
Basin/Watershed Name/Number Waccasassa & Withlacoochee		Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Areas are surrounded by pine plantation and a mosaic of forested wetlands that have been subjected to logging. Wetlands are either directly connected with each other or are interconnected through hydric pine plantation. Furrows serve as conveyances allowing for water to travel along them.</p>					
<p>Assessment area description</p> <p>This forested community is dominated by a mixture of hardwoods and conifers in the canopy including pond cypress, slash pines, swamp tupelo, oaks, red maple, bays, and cabbage palms. The understory consists of Virginia willow, dahoon holly, hackberry, sweet gum, loblolly bay, gallberry, fetterbush, saltbush, buttonbush, wax myrtle, titi, pop ash, persimmon and yaupon holly. Groundcover consists of sedges, bushy bluestem, broomsedge, redroot, iris, beakrush, soft rush, chain fern, sawgrass, sand cordgrass, cinnamon fern, and various opportunistic species. Community structure is transitioning based on the coverage of slash pines and dense shrub layers (i.e., fetterbush) and opportunistic species such as Virginia creeper, dog fennel and greenbrier. Strong evidence of cypress logging (i.e., stumps) and hog rooting throughout.</p>					
<p>Significant nearby features</p> <p>The AA is located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River. The AA abuts a transmission corridor to the west and is surrounded by pine plantation on the LNP property. The LNP property is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north.</p>				<p>Uniqueness (considering the relative rarity in relation to the regional</p> <p align="center">None</p>	
<p>Functions</p> <p>Functions include wildlife feeding and refuge and water quality and storage benefits, although limited by the surrounding silviculture practices.</p>				<p>Mitigation for previous permit/other historic use</p> <p align="center">None</p>	
<p>Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to</p> <p>birds (passerine, raptor and wading birds), small/medium mammals (hogs, etc.), amphibians and reptiles</p>				<p>Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the</p> <p align="center">wading birds (SSC)</p>	
<p>Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):</p> <p align="center">hog rooting</p>					
<p>Additional relevant factors:</p>					
<p>Assessment conducted by:</p> <p>Entrix - VAF/DDS, ESI - Gary Howalt</p>				<p>Assessment date(s):</p> <p>Entrix - October 2009 thru January 2010, ESI - March 2011</p>	

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

IMPACT

Site/Project Name Progress Energy Florida - Levy Nuclear Plant	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Wetland Forested Mixed - Temporary Impacts
Impact or Mitigation IMPACT	Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt	Assessment date: Entrix - October 2009 thru January 2010, ESI - March 2011

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 water functions	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 5 with 5	w/o pres or current - Area is surrounded by pine plantation which provided minimal habitat and limited opportunity for wildlife utilization including foraging, refuge and passage. The AA is with the LNP property which is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north. The LNP property also abuts pine plantation to the east, Goethe State Forest to the north and is situated 8 miles east of the Gulf of Mexico and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau and the Withlacoochee River. with - No loss anticipated from temporary impacts.
.500(6)(b) Water Environment (n/a for uplands) w/o pres or current 7 with 7	w/o pres or current - No standing water in most areas, but water level indicators, hydric soils and community structure suggest moderate/good hydrology. Some wetlands still have evidence of hydrologic stress from silviculture based on transitional vegetation, pine coverage and dying trees. with - No loss in hydrologic function anticipated.
.500(6)(c) Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 8 with 7	w/o pres or current - This forested community is dominated by a mixture of hardwoods and conifers in the canopy including pond cypress, slash pines, swamp tupelo, oaks, red maple, bays, and cabbage palms. The understory consists of Virginia willow, dahoon holly, hackberry, sweet gum, loblolly bay, gallberry, fetterbush, saltbush, buttonbush, wax myrtle, titi, pop ash, persimmon and yaupon holly. Groundcover consists of sedges, bushy bluestem, broomsedge, redroot, iris, beakrush, soft rush, chain fern, sawgrass, sand cordgrass, cinnamon fern, and various opportunistic species. Community structure is transitioning based on the coverage of slash pines and dense shrub layers (i.e., fetterbush) and opportunistic species such as Virginia creeper, dog fennel and greenbrier. Strong evidence of cypress logging (i.e., stumps) and hog rooting throughout. with - Partial loss in community structure due to time lag from restoration effort.

Score = sum of above scores/30 (if uplands/20)	
current or w/o pres 0.66667 with 0.63333	

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

For impact assessment areas	
FL = delta x acres =	0.3000

Delta = [with-current]	
0.03333333	

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 Progress Energy Florida - Levy Nuclear Plant		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Wetland Forested Mixed (Logged) - Clearing Only Impacts	
FLUCFCs code 630-1		Further classification (optional)		Impact or Mitigation Site? IMPACT	
				Assessment Area Size (Acres) 14.6	
Basin/Watershed Name/Number Waccasassa & Withlacoochee		Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Areas are surrounded by pine plantation and a mosaic of forested wetlands that have been subjected to logging. Wetlands are either directly connected with each other or are interconnected through hydric pine plantation. Furrows serve as conveyances allowing for water to travel along them.</p>					
<p>Assessment area description</p> <p>Heavily logged forested wetland characterized by transitional vegetation with less than 50% coverage of trees. Community structure is very disturbed from logging activities with stumps and furrows remaining from thinning activities. Similar species composition as those found in forested wetlands, although few cypress and hardwood trees remaining and most coverage provided by transitional vegetation in the shrub layer and groundcover including immature slash pine and oaks, sweetgum, fetterbush, wax myrtle, saltbush, gallberry, buttonbush, broomsedge, maidencane, dog fennel, chain fern, red root, and various opportunistic species. Most cypress have been logged and other trees have been logged indiscriminately as a result of thinning activities providing less of a seed source for natural recruitment. Dead trees and hog rooting also prevalent.</p>					
<p>Significant nearby features</p> <p>The AA is located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River. The AA abuts a transmission corridor to the west and is surrounded by pine plantation on the LNP property. The LNP property is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north.</p>				<p>Uniqueness (considering the relative rarity in relation to the regional</p> <p align="center">None</p>	
<p>Functions</p> <p>Functions include wildlife feeding and refuge and water quality and storage benefits, although limited by the surrounding silviculture practices.</p>				<p>Mitigation for previous permit/other historic use</p> <p align="center">None</p>	
<p>Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to</p> <p>birds (passerine, raptor and wading birds), small/medium mammals (hogs, etc.), amphibians and reptiles</p>				<p>Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the</p> <p align="center">wading birds (SSC)</p>	
<p>Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):</p> <p align="center">hog rooting</p>					
<p>Additional relevant factors:</p>					
<p>Assessment conducted by:</p> <p>Entrix - VAF/DDS, ESI - Gary Howalt</p>				<p>Assessment date(s):</p> <p>Entrix - October 2009 thru January 2010, ESI - March 2011</p>	

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

IMPACT

Site/Project Name Progress Energy Florida - Levy Nuclear Plant	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Wetland Forested Mixed (Logged) - Clearing Only Impacts
Impact or Mitigation IMPACT	Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt	Assessment date: Entrix - October 2009 thru January 2010, ESI - March 2011

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 water functions	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 4	w/o pres or current - Area is surrounded by pine plantation which provided minimal habitat and limited opportunity for wildlife utilization including foraging, refuge and passage. The AA is with the LNP property which is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north. The LNP property also abuts pine plantation to the east, Goethe State Forest to the north and is situated 8 miles east of the Gulf of Mexico and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau and the Withlacoochee River. with - No loss anticipated from clearing only.
.500(6)(b) Water Environment (n/a for uplands) w/o pres or current 7 with 7	w/o pres or current - No standing water in most areas, but water level indicators, hydric soils and community structure suggest moderate/good hydrology. Some wetlands still have evidence of hydrologic stress from silviculture based on transitional vegetation, pine coverage and dying trees. with - No loss in hydrologic function anticipated.
.500(6)(c) Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 6 with 4	w/o pres or current - Heavily logged forested wetland characterized by transitional vegetation with less than 50% coverage of trees. Community structure is very disturbed from logging activities with stumps and furrows remaining from thinning activities. Similar species composition as those found in forested wetlands, although few cypress and hardwood trees remaining and most coverage provided by transitional vegetation in the shrub layer and groundcover including mature slash pine and oaks, sweetgum, fetterbush, wax myrtle, saltbush, gallberry, buttonbush, broomsedge, maidencane, dog fennel, chain fern, red root, and various opportunistic species. Most cypress have been logged and other trees have been logged indiscriminately as a result of thinning activities providing less of a seed source for natural recruitment. Dead trees and hog rooting also prevalent. with - Partial loss in community structure due to conversion from forested wetland to herbaceous system.

Score = sum of above scores/30 (if uplands/20)	
current or w/o pres 0.56667 with 0.5	

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

For impact assessment areas	
FL = delta x acres =	0.9733

Delta = [with-current]	
0.06666667	

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 Progress Energy Florida - Levy Nuclear Plant		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Wetland Forested Mixed (Logged) - Permanent Impacts	
FLUCFCs code 630-1		Further classification (optional)		Impact or Mitigation Site? IMPACT	Assessment Area Size (Acres) 89.1
Basin/Watershed Name/Number Waccasassa & Withlacoochee		Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Areas are surrounded by pine plantation and a mosaic of forested wetlands that have been subjected to logging. Wetlands are either directly connected with each other or are interconnected through hydric pine plantation. Furrows serve as conveyances allowing for water to travel along them.</p>					
<p>Assessment area description</p> <p>Heavily logged forested wetland characterized by transitional vegetation with less than 50% coverage of trees. Community structure is very disturbed from logging activities with stumps and furrows remaining from thinning activities. Similar species composition as those found in forested wetlands, although few cypress and hardwood trees remaining and most coverage provided by transitional vegetation in the shrub layer and groundcover including immature slash pine and oaks, sweetgum, fetterbush, wax myrtle, saltbush, gallberry, buttonbush, broomsedge, maidencane, dog fennel, chain fern, red root, and various opportunistic species. Most cypress have been logged and other trees have been logged indiscriminately as a result of thinning activities providing less of a seed source for natural recruitment. Dead trees and hog rooting also prevalent.</p>					
<p>Significant nearby features</p> <p>The AA is located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River. The AA abuts a transmission corridor to the west and is surrounded by pine plantation on the LNP property. The LNP property is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north.</p>				<p>Uniqueness (considering the relative rarity in relation to the regional</p> <p align="center">None</p>	
<p>Functions</p> <p>Functions include wildlife feeding and refuge and water quality and storage benefits, although limited by the surrounding silviculture practices.</p>				<p>Mitigation for previous permit/other historic use</p> <p align="center">None</p>	
<p>Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to</p> <p>birds (passerine, raptor and wading birds), small/medium mammals (hogs, etc.), amphibians and reptiles</p>				<p>Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the</p> <p align="center">wading birds (SSC)</p>	
<p>Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):</p> <p align="center">hog rooting</p>					
<p>Additional relevant factors:</p>					
<p>Assessment conducted by:</p> <p>Entrix - VAF/DDS, ESI - Gary Howalt</p>				<p>Assessment date(s):</p> <p>Entrix - October 2009 thru January 2010, ESI - March 2011</p>	

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

IMPACT

Site/Project Name Progress Energy Florida - Levy Nuclear Plant	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Wetland Forested Mixed (Logged) - Permanent Impacts
Impact or Mitigation IMPACT	Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt	Assessment date: w/o pres or current - Area is surrounded by pine plantation which provided minimal

Scoring Guidance The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed
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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 water functions	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 4 with 0	w/o pres or current - Area is surrounded by pine plantation which provided minimal habitat and limited opportunity for wildlife utilization including foraging, refuge and passage. The AA is with the LNP property which is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north. The LNP property also abuts pine plantation to the east, Goethe State Forest to the north and is situated 8 miles east of the Gulf of Mexico and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau and the Withlacoochee River. with -
.500(6)(b) Water Environment (n/a for uplands) w/o pres or current 7 with 0	w/o pres or current - No standing water in most areas, but water level indicators, hydric soils and community structure suggest moderate/good hydrology. Some wetlands still have evidence of hydrologic stress from silviculture based on transitional vegetation, pine coverage and dying trees. with -
.500(6)(c) Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 6 with 0	w/o pres or current -Heavily logged forested wetland characterized by transitional vegetation with less than 50% coverage of trees. Community structure is very disturbed from logging activities with stumps and furrows remaining from thinning activities. Similar species composition as those found in forested wetlands, although few cypress and hardwood trees remaining and most coverage provided by transitional vegetation in the shrub layer and groundcover including mature slash pine and oaks, sweetgum, fetterbush, wax myrtle, saltbush, gallberry, buttonbush, broomsedge, maidencane, dog fennel, chain fern, red root, and various opportunistic species. Most cypress have been logged and other trees have been logged indiscriminately as a result of thinning activities providing less of a seed source for natural recruitment. Dead trees and hog rooting also prevalent. with -

Score = sum of above scores/30 (if uplands/20)
current or w/o pres 0.56667 with 0

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

For impact assessment areas
FL = delta x acres = 50.4900

Delta = [with-current]
0.56666667

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 Progress Energy Florida - Levy Nuclear Plant		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Wetland Forested Mixed (Logged) - Temporary Impacts	
FLUCFCs code 630-1		Further classification (optional)		Impact or Mitigation Site? IMPACT	
				Assessment Area Size (Acres) 6.8	
Basin/Watershed Name/Number Waccasassa & Withlacoochee		Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Areas are surrounded by pine plantation and a mosaic of forested wetlands that have been subjected to logging. Wetlands are either directly connected with each other or are interconnected through hydric pine plantation. Furrows serve as conveyances allowing for water to travel along them.</p>					
<p>Assessment area description</p> <p>Heavily logged forested wetland characterized by transitional vegetation with less than 50% coverage of trees. Community structure is very disturbed from logging activities with stumps and furrows remaining from thinning activities. Similar species composition as those found in forested wetlands, although few cypress and hardwood trees remaining and most coverage provided by transitional vegetation in the shrub layer and groundcover including immature slash pine and oaks, sweetgum, fetterbush, wax myrtle, saltbush, gallberry, buttonbush, broomsedge, maidencane, dog fennel, chain fern, red root, and various opportunistic species. Most cypress have been logged and other trees have been logged indiscriminately as a result of thinning activities providing less of a seed source for natural recruitment. Dead trees and hog rooting also prevalent.</p>					
<p>Significant nearby features</p> <p>The AA is located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River. The AA abuts a transmission corridor to the west and is surrounded by pine plantation on the LNP property. The LNP property is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north.</p>				<p>Uniqueness (considering the relative rarity in relation to the regional</p> <p align="center">None</p>	
<p>Functions</p> <p>Functions include wildlife feeding and refuge and water quality and storage benefits, although limited by the surrounding silviculture practices.</p>				<p>Mitigation for previous permit/other historic use</p> <p align="center">None</p>	
<p>Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to</p> <p>birds (passerine, raptor and wading birds), small/medium mammals (hogs, etc.), amphibians and reptiles</p>				<p>Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the</p> <p align="center">wading birds (SSC)</p>	
<p>Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):</p> <p align="center">hog rooting</p>					
<p>Additional relevant factors:</p>					
<p>Assessment conducted by:</p> <p>Entrix - VAF/DDS, ESI - Gary Howalt</p>				<p>Assessment date(s):</p> <p>Entrix - October 2009 thru January 2010, ESI - March 2011</p>	

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

IMPACT

Site/Project Name Progress Energy Florida - Levy Nuclear Plant	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Wetland Forested Mixed (Logged) - Temporary Impacts
Impact or Mitigation IMPACT	Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt	Assessment date: Entrix - October 2009 thru January 2010, ESI - March 2011

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 water functions	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	<p>w/o pres or current - Area is surrounded by pine plantation which provided minimal habitat and limited opportunity for wildlife utilization including foraging, refuge and passage. The AA is with the LNP property which is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north. The LNP property also abuts pine plantation to the east, Goethe State Forest to the north and is situated 8 miles east of the Gulf of Mexico and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau and the Withlacoochee River.</p> <p>with - No loss anticipated from temporary impacts.</p>			
<div> <div>w/o pres or current</div> <div>4</div> </div> <div> <div>with</div> <div>4</div> </div>				
.500(6)(b)Water Environment (n/a for uplands)	<p>w/o pres or current - No standing water in most areas, but water level indicators, hydric soils and community structure suggest moderate/good hydrology. Some wetlands still have evidence of hydrologic stress from silviculture based on transitional vegetation, pine coverage and dying trees.</p> <p>with - No loss in hydrologic function anticipated.</p>			
<div> <div>w/o pres or current</div> <div>7</div> </div> <div> <div>with</div> <div>7</div> </div>				
.500(6)(c)Community structure	<p>w/o pres or current -Heavily logged forested wetland characterized by transitional vegetation with less than 50% coverage of trees. Community structure is very disturbed from logging activities with stumps and furrows remaining from thinning activities. Similar species composition as those found in forested wetlands, although few cypress and hardwood trees remaining and most coverage provided by transitional vegetation in the shrub layer and groundcover including mature slash pine and oaks, sweetgum, fetterbush, wax myrtle, saltbush, gallberry, buttonbush, broomsedge, maidencane, dog fennel, chain fern, red root, and various opportunistic species. Most cypress have been logged and other trees have been logged indiscriminately as a result of thinning activities providing less of a seed source for natural recruitment. Dead trees and hog rooting also prevalent.</p> <p>with - Partial loss in community structure due to time lag from restoration effort.</p>			
<div> <div>w/o pres or current</div> <div>6</div> </div> <div> <div>with</div> <div>5</div> </div>				

Score = sum of above scores/30 (if uplands/20)
current
or w/o pres
0.56667
with
0.53333

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

For impact assessment areas
FL = delta x acres =
0.2267

Delta = [with-current]
0.03333333

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 Progress Energy Florida - Levy Nuclear Plant		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Freshwater Marsh - Permanent Impact	
FLUCFCs code 640		Further classification (optional)		Impact or Mitigation Site? IMPACT	Assessment Area Size (Acres) 1.3
Basin/Watershed Name/Number Upper Coastal		Affected Waterbody (Class) Class III		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 These wetlands are the adjacent freshwater wetland fringe of the Gulf of Mexico located in a maintained powerline right of way. They are immediately south, west and north of the perimeter fence of the Crystal River Nuclear Power Plant.					
Assessment area description These low quality freshwater vegetated non-forested wetlands support no canopy species and are primarily composed of low growing grasses and shrubs because of the continual mowing of the right of way. Specifically, the community is composed of arrowhead (<i>Sagittaria lancifolia</i>), beakrush (<i>Rhynchospora</i> spp.), cattails (<i>Typha</i> spp.), and various panic grasses (<i>Panicum</i> spp.), among others. They comprise five impact areas in the powerline right of way.					
Significant nearby features The AA is located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River. The AA abuts a transmission corridor to the west and is surrounded by pine plantation on the LNP property. The LNP property is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north.			Uniqueness (considering the relative rarity in relation to the regional None		
Functions Functions include wildlife feeding and refuge and water quality and storage benefits, although limited by the surrounding silviculture practices.			Mitigation for previous permit/other historic use None		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to birds (passerine, raptor and wading birds), small/medium mammals (hogs, etc.), amphibians and reptiles			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the wading birds (SSC)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): hog rooting					
Additional relevant factors:					
Assessment conducted by: Gary Howalt, Michael Stowe & Brett Anderson - ESI			Assessment date(s): 09/16/11		

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

IMPACT

Site/Project Name Progress Energy Florida - Levy Nuclear Plant	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Freshwater Marsh - Permanent Impact
Impact or Mitigation IMPACT	Assessment conducted by: Gary Howalt, Michael Stowe & Brett Anderson - ESI	Assessment date: 9/16/2011

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	Wetland is saturated and hydric indicators and soils were observed. However rutting of the areas from the continual mowing of these	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 <div>3</div> <div>0</div>	Low quality wetland in a maintained powerline right of way and adjacent on three side to the Crystal River Nuclear Power Plant.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with <div>4</div> <div>0</div>	Wetland is saturated and hydric indicators and soils were observed. However rutting of the areas from the continual mowing of these areas and a dirt access road has altered the flow and hydrology of the areas.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with <div>5</div> <div>0</div>	The community is composed of arrowhead (<i>Sagittaria lancifolia</i>), beakrush (<i>Rhynchospora</i> spp.), cattails (<i>Typha</i> spp.), and various panic grasses (<i>Panicum</i> spp.), among others and is mowed.

Score = sum of above scores/30 (if uplands/20)	
current	with
or w/o pres	
<div>0.4</div>	<div>0</div>

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

For impact assessment areas	
FL = delta x acres =	<div>0.5200</div>

Delta = [with-current]
<div>0.4</div>

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 Progress Energy Florida - Levy Nuclear Plant		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Freshwater Marsh - Permanent Impact	
FLUCFCs code 641		Further classification (optional)		Impact or Mitigation Site? IMPACT	Assessment Area Size (Acres) 3.6
Basin/Watershed Name/Number Waccasassa, Withlacoochee & Upper Coastal		Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Areas are surrounded by pine plantation and a mosaic of forested wetlands that have been subjected to logging. Wetlands are either directly connected with each other or are interconnected through hydric pine plantation. Furrows serve as conveyances allowing for water to travel along them.</p>					
<p>Assessment area description</p> <p>Successional marsh community converted from historic forested systems as a result of logging. Most have limited structure and poor zonation likely associated with poor hydrology; and therefore, provide minimal wildlife habitat. Vegetation consists of pickerelweed, smartweed, cattail and fireflag in the core with maidencane, rushes, beakrushes, sedges, yellow-eyed grasses, bog button, buttonbush, St. John's wort, saltbush and wax myrtle in the outer zones. Disturbed areas also contain broomsedge, bushy bluestem, red root, dog fennel, and ragweed.</p>					
<p>Significant nearby features</p> <p>The AA is located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River. The AA abuts a transmission corridor to the west and is surrounded by pine plantation on the LNP property. The LNP property is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north.</p>			<p>Uniqueness (considering the relative rarity in relation to the regional</p> <p align="center">None</p>		
<p>Functions</p> <p>Functions include wildlife feeding and refuge and water quality and storage benefits, although limited by the surrounding silviculture practices.</p>			<p>Mitigation for previous permit/other historic use</p> <p align="center">None</p>		
<p>Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to</p> <p>birds (passerine, raptor and wading birds), small/medium mammals (hogs, etc.), amphibians and reptiles</p>			<p>Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the</p> <p align="center">wading birds (SSC)</p>		
<p>Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):</p> <p align="center">hog rooting</p>					
<p>Additional relevant factors:</p>					
<p>Assessment conducted by:</p> <p>Entrix - VAF/DDS, ESI - Gary Howalt</p>			<p>Assessment date(s):</p> <p>Entrix - October 2009 thru January 2010, ESI - March 2011</p>		

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

IMPACT

Site/Project Name Progress Energy Florida - Levy Nuclear Plant	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Freshwater Marsh - Permanent Impact
Impact or Mitigation IMPACT	Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt	Assessment date: Entrix - October 2009 thru January 2010, ESI - March 2011

Scoring Guidance The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed
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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 water functions	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 3 with 0	w/o pres or current - Area is surrounded by pine plantation which provided minimal habitat and limited opportunity for wildlife utilization including foraging, refuge and passage. The AA is with the LNP property which is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north. The LNP property also abuts pine plantation to the east, Goethe State Forest to the north and is situated 8 miles east of the Gulf of Mexico and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau and the Withlacoochee River. with -
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current 5 with 0	w/o pres or current - No standing water in most areas, but water level indicators, hydric soils and community structure suggest moderate/good hydrology. Some wetlands still have evidence of hydrologic stress from silviculture based on transitional vegetation, pine coverage and dying trees. with -
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 5 with 0	w/o pres or current -Successional marsh community converted from historic forested systems as a result of logging. Most have limited structure and poor zonation likely associated with poor hydrology; and therefore, provide minimal wildlife habitat. Vegetation consists of pickerelweed, smartweed, cattail and fireflag in the core with maidencane, rushes, beakrushes, sedges, yellow-eyed grasses, bog button, buttonbush, St. John's wort, saltbush and wax myrtle in the outer zones. Disturbed areas also contain broomsedge, bushy bluestem, red root, dog fennel, and ragweed. with -

Score = sum of above scores/30 (if uplands/20)
current or w/o pres 0.43333 with 0

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

For impact assessment areas
FL = delta x acres = 1.5600

Delta = [with-current]
0.43333333

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 Progress Energy Florida - Levy Nuclear Plant		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Freshwater Marsh - Temporary Impact	
FLUCFCs code 641		Further classification (optional)		Impact or Mitigation Site? IMPACT	Assessment Area Size (Acres) 0.4
Basin/Watershed Name/Number Waccasassa		Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Areas are surrounded by pine plantation and a mosaic of forested wetlands that have been subjected to logging. Wetlands are either directly connected with each other or are interconnected through hydric pine plantation. Furrows serve as conveyances allowing for water to travel along them.</p>					
<p>Assessment area description</p> <p>Successional marsh community converted from historic forested systems as a result of logging. Most have limited structure and poor zonation likely associated with poor hydrology; and therefore, provide minimal wildlife habitat. Vegetation consists of pickerelweed, smartweed, cattail and fireflag in the core with maidencane, rushes, beakrushes, sedges, yellow-eyed grasses, bog button, buttonbush, St. John's wort, saltbush and wax myrtle in the outer zones. Disturbed areas also contain broomsedge, bushy bluestem, red root, dog fennel, and ragweed.</p>					
<p>Significant nearby features</p> <p>The AA is located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River. The AA abuts a transmission corridor to the west and is surrounded by pine plantation on the LNP property. The LNP property is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north.</p>			<p>Uniqueness (considering the relative rarity in relation to the regional</p> <p align="center">None</p>		
<p>Functions</p> <p>Functions include wildlife feeding and refuge and water quality and storage benefits, although limited by the surrounding silviculture practices.</p>			<p>Mitigation for previous permit/other historic use</p> <p align="center">None</p>		
<p>Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to</p> <p>birds (passerine, raptor and wading birds), small/medium mammals (hogs, etc.), amphibians and reptiles</p>			<p>Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the</p> <p align="center">wading birds (SSC)</p>		
<p>Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):</p> <p align="center">hog rooting</p>					
<p>Additional relevant factors:</p>					
<p>Assessment conducted by:</p> <p>Entrix - VAF/DDS, ESI - Gary Howalt</p>			<p>Assessment date(s):</p> <p>Entrix - October 2009 thru January 2010, ESI - March 2011</p>		

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

IMPACT

Site/Project Name Progress Energy Florida - Levy Nuclear Plant	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Freshwater Marsh - Temporary Impact
Impact or Mitigation IMPACT	Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt	Assessment date: Entrix - October 2009 thru January 2010, ESI - March 2011

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 water functions	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	<p>w/o pres or current - Area is surrounded by pine plantation which provided minimal habitat and limited opportunity for wildlife utilization including foraging, refuge and passage. The AA is with the LNP property which is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north. The LNP property also abuts pine plantation to the east, Goethe State Forest to the north and is situated 8 miles east of the Gulf of Mexico and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau and the Withlacoochee River.</p> <p>with - No loss anticipated from temporary impacts.</p>
	3	3	
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current	with	<p>w/o pres or current - No standing water in most areas, but water level indicators, hydric soils and community structure suggest moderate/good hydrology. Some wetlands still have evidence of hydrologic stress from silviculture based on transitional vegetation, pine coverage and dying trees.</p> <p>with - No loss in hydrologic function anticipated.</p>
	5	5	
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current	with	<p>w/o pres or current -Successional marsh community converted from historic forested systems as a result of logging. Most have limited structure and poor zonation likely associated with poor hydrology; and therefore, provide minimal wildlife habitat. Vegetation consists of pickerelweed, smartweed, cattail and fireflag in the core with maidencane, rushes, beakrushes, sedges, yellow-eyed grasses, bog button, buttonbush, St. John's wort, saltbush and wax myrtle in the outer zones. Disturbed areas also contain broomsedge, bushy bluestem, red root, dog fennel, and ragweed.</p> <p>with - Partial loss in community structure due to time lag from restoration effort.</p>
	5	4	

Score = sum of above scores/30 (if uplands/20)	
current	with
or w/o pres	
0.43333	0.4

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

For impact assessment areas	
FL = delta x acres =	0.0133

Delta = [with-current]
0.03333333

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 Progress Energy Florida - Levy Nuclear Plant		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Wet Prairie - Permanent Impact	
FLUCFCs code 643		Further classification (optional)		Impact or Mitigation Site? IMPACT	Assessment Area Size (Acres) 2
Basin/Watershed Name/Number Waccasassa		Affected Waterbody (Class) Class III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Areas are surrounded by pine plantation and a mosaic of forested wetlands that have been subjected to logging. Wetlands are either directly connected with each other or are interconnected through hydric pine plantation. Furrows serve as conveyances allowing for water to travel along them.</p>					
<p>Assessment area description</p> <p>Successional wet prairie community converted from historic forested systems as a result of logging. No defined structure or zonation and beds/furrows are still evident in some areas. Vegetation consists of maidencane, blue maidencane, bushy bluestem, sand cordgrass, yelloweyed grasses, redroot, bog buttons, red ludwigia, rushes, beakruses, and sedges. Scattered bushes such as buttonbush, St. John's wort, saltbush and wax myrtle also occur.</p>					
<p>Significant nearby features</p> <p>The AA is located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River. The AA abuts a transmission corridor to the west and is surrounded by pine plantation on the LNP property. The LNP property is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north.</p>			<p>Uniqueness (considering the relative rarity in relation to the regional)</p> <p align="center">None</p>		
<p>Functions</p> <p>Functions include wildlife feeding and refuge and water quality and storage benefits, although limited by the surrounding silviculture practices.</p>			<p>Mitigation for previous permit/other historic use</p> <p align="center">None</p>		
<p>Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected)</p> <p>birds (passerine, raptor and wading birds), small/medium mammals (hogs, etc.), amphibians and reptiles</p>			<p>Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the)</p> <p align="center">wading birds (SSC)</p>		
<p>Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):</p> <p align="center">hog rooting</p>					
<p>Additional relevant factors:</p>					
<p>Assessment conducted by:</p> <p>Entrix - VAF/DDS, ESI - Gary Howalt</p>			<p>Assessment date(s):</p> <p>Entrix - October 2009 thru January 2010, ESI - March 2011</p>		

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

IMPACT

Site/Project Name Progress Energy Florida - Levy Nuclear Plant	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Wet Prairie - Permanent Impact
Impact or Mitigation IMPACT	Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt	Assessment date: Entrix - October 2009 thru January 2010, ESI - March 2011

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 water functions	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 3 with 0	w/o pres or current - Area is surrounded by pine plantation which provided minimal habitat and limited opportunity for wildlife utilization including foraging, refuge and passage. The AA is with the LNP property which is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north. The LNP property also abuts pine plantation to the east, Goethe State Forest to the north and is situated 8 miles east of the Gulf of Mexico and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau and the Withlacoochee River. with -
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current 6 with 0	w/o pres or current - No standing water in most areas, but water level indicators, hydric soils and community structure suggest moderate/good hydrology. Some wetlands still have evidence of hydrologic stress from silviculture based on transitional vegetation, pine coverage and dying trees. with -
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 6 with 0	w/o pres or current -Successional marsh community converted from historic forested systems as a result of logging. Most have limited structure and poor zonation likely associated with poor hydrology; and therefore, provide minimal wildlife habitat. Vegetation consists of pickerelweed, smartweed, cattail and fireflag in the core with maidencane, rushes, beakrushes, sedges, yellow-eyed grasses, bog button, buttonbush, St. John's wort, saltbush and wax myrtle in the outer zones. Disturbed areas also contain broomsedge, bushy bluestem, red root, dog fennel, and ragweed. with -

Score = sum of above scores/30 (if uplands/20)
current or w/o pres 0.5 with 0

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

For impact assessment areas
FL = delta x acres = 1.0000

Delta = [with-current]
0.5

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 Progress Energy Florida - Levy Nuclear Plant		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Wet Prairie - Temporary Impact	
FLUCFCs code 643		Further classification (optional)		Impact or Mitigation Site? IMPACT	Assessment Area Size (Acres) 0.9
Basin/Watershed Name/Number Waccasassa		Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Areas are surrounded by pine plantation and a mosaic of forested wetlands that have been subjected to logging. Wetlands are either directly connected with each other or are interconnected through hydric pine plantation. Furrows serve as conveyances allowing for water to travel along them.</p>					
<p>Assessment area description</p> <p>Successional wet prairie community converted from historic forested systems as a result of logging. No defined structure or zonation and beds/furrows are still evident in some areas. Vegetation consists of maidencane, blue maidencane, bushy bluestem, sand cordgrass, yelloweyed grasses, redroot, bog buttons, red ludwigia, rushes, beakrushes, and sedges. Scattered bushes such as buttonbush, St. John's wort, saltbush and wax myrtle also occur.</p>					
Significant nearby features		Uniqueness (considering the relative rarity in relation to the regional			
<p>The AA is located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River. The AA abuts a transmission corridor to the west and is surrounded by pine plantation on the LNP property. The LNP property is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north.</p>		<p align="center">None</p>			
Functions		Mitigation for previous permit/other historic use			
<p>Functions include wildlife feeding and refuge and water quality and storage benefits, although limited by the surrounding silviculture practices.</p>		<p align="center">None</p>			
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the			
<p>birds (passerine, raptor and wading birds), small/medium mammals (hogs, etc.), amphibians and reptiles</p>		<p align="center">wading birds (SSC)</p>			
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):					
<p align="center">hog rooting</p>					
Additional relevant factors:					
Assessment conducted by:			Assessment date(s):		
EntriX - VAF/DDS, ESI - Gary Howalt			EntriX - October 2009 thru January 2010, ESI - March 2011		

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

IMPACT

Site/Project Name Progress Energy Florida - Levy Nuclear Plant	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Wet Prairie - Temporary Impact
Impact or Mitigation IMPACT	Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt	Assessment date: Entrix - October 2009 thru January 2010, ESI - March 2011

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	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	<p>w/o pres or current - Area is surrounded by pine plantation which provided minimal habitat and limited opportunity for wildlife utilization including foraging, refuge and passage. The AA is with the LNP property which is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north. The LNP property also abuts pine plantation to the east, Goethe State Forest to the north and is situated 8 miles east of the Gulf of Mexico and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau and the Withlacoochee River.</p> <p>with - No loss anticipated from temporary impacts.</p>			
<div> <div>w/o pres or current</div> <div>3</div> </div> <div> <div>with</div> <div>3</div> </div>				
.500(6)(b)Water Environment (n/a for uplands)	<p>w/o pres or current - No standing water in most areas, but water level indicators, hydric soils and community structure suggest moderate/good hydrology. Some wetlands still have evidence of hydrologic stress from silviculture based on transitional vegetation, pine coverage and dying trees.</p> <p>with - No loss in hydrologic function anticipated.</p>			
<div> <div>w/o pres or current</div> <div>6</div> </div> <div> <div>with</div> <div>6</div> </div>				
.500(6)(c)Community structure	<p>w/o pres or current -Successional wet prairie community converted from historic forested systems as a result of logging. No defined structure or zonation and beds/furrows are still evident in some areas. Vegetation consists of maidencane, blue maidencane, bushy bluestem, sand cordgrass, yelloweyed grasses, redroot, bog buttons, red ludwigia, rushes, beakrushes, and sedges. Scattered bushes such as buttonbush, St. John's wort, saltbush and wax myrtle also occur.</p> <p>with - Partial loss in community structure due to time lag from restoration effort.</p>			
<div> <div>w/o pres or current</div> <div>6</div> </div> <div> <div>with</div> <div>5</div> </div>				

Score = sum of above scores/30 (if uplands/20)
current
or w/o pres
0.5
with
0.46667

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

For impact assessment areas
FL = delta x acres =
0.0300

Delta = [with-current]
0.03333333

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 Progress Energy Florida - Levy Nuclear Plant		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Streams and Waterways - Permanent Impact	
FLUCFCs code 510		Further classification (optional)		Impact or Mitigation Site? IMPACT	Assessment Area Size (Acres) 2.6
Basin/Watershed Name/Number Withlacoochee & Upper Coastal		Affected Waterbody (Class) Class III		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 Areas are within the Cross Florida Barge Canal, the Inglis Lock Diversion Canal and the Crystal River Energy Complex Main Discharge Canal.					
Assessment area description Open water within the Cross Florida Barge Canal, the Inglis Lock Diversion Canal and the Crystal River Energy Complex Main Discharge Canal.					
Significant nearby features The AA is located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River. The AA abuts a transmission corridor to the west and is surrounded by pine plantation on the LNP property. The LNP property is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north.			Uniqueness (considering the relative rarity in relation to the regional None		
Functions Functions include feeding and refuge for some aquatic fish and wildlife along with some water quality and storage benefits.			Mitigation for previous permit/other historic use None		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to fish, birds (passerine, raptor and wading birds), amphibians and reptiles			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the wading birds (SSC), manatee		
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: Entrix - VAF/DDS, ESI - Gary Howalt			Assessment date(s): Entrix - October 2009 thru January 2010, ESI - March 2011		

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

IMPACT

Site/Project Name Progress Energy Florida - Levy Nuclear Plant	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Streams and Waterways - Permanent Impact
Impact or Mitigation IMPACT	Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt	Assessment date: Entrix - October 2009 thru January 2010, ESI - March 2011

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 water functions	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 <input type="checkbox"/> <input type="checkbox"/>	No mitigation require/necessary for open water impacts.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with <input type="checkbox"/> <input type="checkbox"/>	
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with <input type="checkbox"/> <input type="checkbox"/>	

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

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

For impact assessment areas	
FL = delta x acres =	0.0000

Delta = [with-current]
0

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 Progress Energy Florida - Levy Nuclear Plant		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Upland Cut Ditch - Permanent Impact	
FLUCFCs code 511		Further classification (optional)		Impact or Mitigation Site? IMPACT	
				Assessment Area Size (Acres) 0.1	
Basin/Watershed Name/Number Upper Coastal		Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Areas are surrounded by pine plantation and a mosaic of forested wetlands that have been subjected to logging. Wetlands are either directly connected with each other or are interconnected through hydric pine plantation. Furrows serve as conveyances allowing for water to travel along them.</p> <p>Assessment area description</p> <p>Upland cut ditch that doesn't support wetland vegetation.</p>					
<p>Significant nearby features</p> <p>The AA is located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River. The AA abuts a transmission corridor to the west and is surrounded by pine plantation on the LNP property. The LNP property is bordered by U.S. 19 to the west, C.R. 40 to the south and C.R. 33 to the east and north.</p>			<p>Uniqueness (considering the relative rarity in relation to the regional)</p> <p align="center">None</p>		
<p>Functions</p> <p>Functions include wildlife feeding and refuge and water quality and storage benefits, although limited by the surrounding silviculture practices.</p>			<p>Mitigation for previous permit/other historic use</p> <p align="center">None</p>		
<p>Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected)</p> <p>birds (passerine, raptor and wading birds), small/medium mammals (hogs, etc.), amphibians and reptiles</p>			<p>Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the)</p> <p align="center">wading birds (SSC)</p>		
<p>Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):</p>					
<p>Additional relevant factors:</p>					
<p>Assessment conducted by:</p> <p>Entrix - VAF/DDS, ESI - Gary Howalt</p>			<p>Assessment date(s):</p> <p>Entrix - October 2009 thru January 2010, ESI - March 2011</p>		

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

IMPACT

Site/Project Name Progress Energy Florida - Levy Nuclear Plant	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Upland Cut Ditch - Permanent Impact
Impact or Mitigation IMPACT	Assessment conducted by: Entrix - VAF/DDS, ESI - Gary Howalt	Assessment date: Entrix - October 2009 thru January 2010, ESI - March 2011

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 water functions	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 <input type="checkbox"/> <input type="checkbox"/>	No mitigation required for impacts to upland cut ditches.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with <input type="checkbox"/> <input type="checkbox"/>	
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with <input type="checkbox"/> <input type="checkbox"/>	

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

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

For impact assessment areas	
FL = delta x acres =	0.0000

Delta = [with-current]
0

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 Boarshead Ranch		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Activity Area 1, Lake North, Herbaceous Preservation/WQ Enhancement	
FLUCFCs code 520		Further classification (optional)		Impact or Mitigation Site? MITIGATION	Assessment Area Size (Acres) 2.4
Basin/Watershed Name/Number Withlacoochee		Affected Waterbody (Class) Class III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Boarshead Ranch is located near the southwest corner of the Green Swamp, it abuts the Withlacoochee River and state-preserved lands to the east and the headwaters of the Hillsborough River to the South. This area is hydrologically connected to an offsite wetland and is surrounded by improved pasture and oak hammock.</p>					
<p>Assessment area description This lake community was formerly a marsh system that was excavated for peat mining activities. The wetland is hydrologically connected surrounding lakes via a ditch. It is also connected to offsite wetlands to the north. The area consists of open water with a floating vegetation dominated by water hyacinth and sparse pickerelweed. Side slopes are dominated by pasture grasses including bermuda grass, dog fennel, and frog fruit. The area is being targeted for enhancement to establish a more functional wetland characterized as a flatwood prairie lake.</p>					
Significant nearby features Green Swamp, Hillsborough River, Withlacoochee River, and state preserved lands.				Uniqueness (considering the relative rarity in relation to the regional None	
Functions wildlife refuge and foraging, water treatment				Mitigation for previous permit/other historic use	
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to wading birds, reptiles, amphibians, large/medium mammals, possible fish habitat				Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the Wading birds (SSC), Osprey (SSC), Bald eagle (T)	
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): american alligator, osprey, bald eagle, yellow slider, black racer, water moccasin, brim and bass					
Additional relevant factors: Historic marsh system excavated for peat mining					
Assessment conducted by: AMF/VAF-Entrix; Shannon Julien/Joe Brinson - ESI				Assessment date(s): 2/10/10-Entrix, 3/20-23/11-ESI	

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

MITIGATION

Site/Project Name Boarshead Ranch	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Activity Area 1, Lake North, Herbaceous Preservation/WQ Enhancement
Impact or Mitigation Mitigation	Assessment conducted by: AMF/VAF-Entrix; Shannon Julien/Joe Brinson - ESI	Assessment date: 2/10/10-Entrix, 3/20-23/11-ESI

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 <div>7</div> <div>8</div>	Location and landscape support will be enhanced when exotic/invasives are removed.
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) <div>W</div> w/o pres or current with <div>6</div> <div>7</div>	Reduction of surrounding agricultural uses will alleviate sediment and chemical loading, and removing exotic vegetation will allow for native aquatics that will also aid in improved water quality.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with <div>6</div> <div>8</div>	With the removal of exotic species, biodiversity can be increased for both vegetation and wildlife.

Score = sum of above scores/30 (if uplands/20) current or w/o pres with <div>0.6333</div> <div>0.7667</div>
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If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	0.7
Adjusted mitigation delta =	0.093333
*use 1.0 for creation	

For impact assessment areas
FL = delta x acres =

Delta = [with-current] 0.133333333
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If mitigation (creation or enhancement)		
Time Lag	Years 5	t-factor = 1.14
*Risk factor = (1 to 3, 0.25 increments)		1
*use 1.0 for preservation		

For mitigation assessment areas
RFG = delta/(t-factor x risk) = 0.0819

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

Site/Project Name Boarshead Ranch		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Activity Area 1, Cropland and Pastureland, Forested Creation	
FLUCFCs code 210		Further classification (optional)		Impact or Mitigation Site? MITIGATION	
				Assessment Area Size (Acres) 6.8	
Basin/Watershed Name/Number Withlacoochee		Affected Waterbody (Class) N/A		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Boarshead Ranch is located near the southwest corner of the Green Swamp, it abuts the Withlacoochee River and state-preserved lands to the east and the headwaters of the Hillsborough River to the South. This area is hydrologically connected to an offsite wetland and is surrounded by improved pasture.</p>					
<p>Assessment area description This area consists of pastureland and is being targeted for wetland creation to establish a mixed forested system characterized by a dome swamp/hardwood community.</p>					
Significant nearby features Green Swamp, Hillsborough River, Withlacoochee River, and state preserved lands.				Uniqueness (considering the relative rarity in relation to the regional)	
Functions Wildlife refuge and foraging, water treatment				Mitigation for previous permit/other historic use	
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to small, medium, large mammals, wading birds, reptiles, amphibians				Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the Wading birds (SSC)	
<p>Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Sandhill cranes, snowy egrets</p>					
Assessment conducted by: AMF/VAF-Entrix; Shannon Julien/Joe Brinson - ESI				Assessment date(s): 2/10/10-Entrix, 3/20-23/11-ESI	

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

MITIGATION

Site/Project Name Boarshead Ranch	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Activity Area 1, Cropland and Pastureland, Forested Creation
Impact or Mitigation Mitigation	Assessment conducted by: AMF/VAF-Entrix; Shannon Julien/Joe Brinson - ESI	Assessment date: 2/10/10-Entrix, 3/20-23/11-ESI

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	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 0 8	Restored historic conditions contiguous to other wetlands on and off-site
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) W w/o pres or current with 0 8	Restored historic hydroperiod and habitat, flood storage, water attenuation
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 0 8	Increased vegetative and wildlife biodiversity, increased habitat for refuge and foraging

Score = sum of above scores/30 (if uplands/20) current or w/o pres with 0.0000 0.8000

If preservation as mitigation, *Preservation adjustment factor = (0 to 1, 1/10th increments) Adjusted mitigation delta = *use 1.0 for creation	
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For impact assessment areas FL = delta x acres =	
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Delta = [with-current] 0.8

If mitigation (creation or enhancement)			
Time Lag	Years 21 – 25	t-factor =	1.92
*Risk factor = (1 to 3, 0.25 increments)			1.5
*use 1.0 for preservation			

For mitigation assessment areas RFG = delta/(t-factor x risk) =		0.2778
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PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name Boarshead Ranch		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Activity Area 1, Cropland and Pastureland, Herbaceous Creation/Enhancement	
FLUCFCs code 210		Further classification (optional)		Impact or Mitigation Site? MITIGATION	
				Assessment Area Size (Acres) 2.4	
Basin/Watershed Name/Number Withlacoochee		Affected Waterbody (Class)		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Boarshead Ranch is located near the southwest corner of the Green Swamp, it abuts the Withlacoochee River and state-preserved lands to the east and the headwaters of the Hillsborough River to the South. This area is hydrologically connected to an offsite wetland and is surrounded by improved pasture.</p>					
<p>Assessment area description</p> <p>This area consists of pastureland and is being targeted for wetland creation to establish a mixed forested system characterized by a dome swamp/hardwood community.</p>					
Significant nearby features Green Swamp, Hillsborough River, Withlacoochee River, and state preserved lands.				Uniqueness (considering the relative rarity in relation to the regional	
Functions Wildlife refuge and foraging, water treatment				Mitigation for previous permit/other historic use	
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to small, medium, large mammals, wading birds, reptiles, amphibians				Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the Wading birds (SSC)	
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): None					
Additional relevant factors:					
Assessment conducted by: AMF/VAF-Entrix; Shannon Julien/Joe Brinson - ESI				Assessment date(s): 2/10/10-Entrix, 3/20-23/11-ESI	

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

MITIGATION

Site/Project Name Boarshead Ranch	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Activity Area 1, Cropland and Pastureland, Herbaceous Creation/Enhancement
Impact or Mitigation Mitigation	Assessment conducted by: AMF/VAE-Entrix; Shannon Julien/Joe Brinson - ESI	Assessment date: 2/10/10-Entrix, 3/20-23/11-ESI

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 <input type="text" value="0"/> with <input type="text" value="8"/>	Restored historic wetland contiguous to on and off-site wetlands
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) <input type="text" value="W"/> w/o pres or current <input type="text" value="0"/> with <input type="text" value="7"/>	Restore historic hydroperiods
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current <input type="text" value="0"/> with <input type="text" value="8"/>	Increased biodiversity, improved refuge and foraging habitat

Score = sum of above scores/30 (if uplands/20)
current or w/o pres <input type="text" value="0.0000"/> with <input type="text" value="0.7667"/>

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	<input type="text"/>
Adjusted mitigation delta =	<input type="text"/>
*use 1.0 for creation	

For impact assessment areas	
FL = delta x acres =	<input type="text"/>

Delta = [with-current]
0.76666667

If mitigation (creation or enhancement)			
Time Lag	Years <input type="text" value="5"/>	t-factor =	1.14
*Risk factor = (1 to 3, 0.25 increments)			1.75
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.3843

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

Site/Project Name Boarshead Ranch		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Activity Area 1, Lake (Central), Herbaceous Preservation	
FLUCFCs code 520		Further classification (optional)		Impact or Mitigation Site? MITIGATION	
				Assessment Area Size (Acres) 1.2	
Basin/Watershed Name/Number Withlacoochee		Affected Waterbody (Class) Class III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Boarshead Ranch is located near the southwest corner of the Green Swamp, it abuts the Withlacoochee River and state-preserved lands to the east and the headwaters of the Hillsborough River to the South. This area is hydrologically connected to an offsite wetland and is surrounded by improved pasture and oak hammock.</p>					
<p>Assessment area description</p> <p>This lake community was formerly a marsh system that was excavated for peat mining activities. The wetland is hydrologically connected surrounding lakes via a ditch. It is also connected to offsite wetlands to the north. The area consists of open water with a floating vegetation dominated by water hyacinth and sparse pickerelweed. Side slopes are dominated by pasture grasses including bermuda grass, dog fennel, and frog fruit. The area is being targeted for enhancement to establish a more functional wetland characterized as a flatwood prairie lake.</p>					
Significant nearby features Green Swamp, Hillsborough River, Withlacoochee River, and state preserved lands.			Uniqueness (considering the relative rarity in relation to the regional		
Functions wildlife refuge and foraging, water treatment			Mitigation for previous permit/other historic use		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to wading birds, reptiles, amphibians, large/medium mammals, possible fish habitat			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the Wading birds (SSC), Osprey (SSC), Bald eagle (T)		
<p>Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):</p> <p>None</p>					
Additional relevant factors:					
Assessment conducted by: AMF/VAF-Entrix; Shannon Julien/Joe Brinson - ESI			Assessment date(s): 2/10/10-Entrix, 3/20-23/11-ESI		

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

MITIGATION

Site/Project Name Boarshead Ranch	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Activity Area 1, Lake (Central), Herbaceous Preservation
Impact or Mitigation Mitigation	Assessment conducted by: AMF/VAF-Entrix; Shannon Julien/Joe Brinson - ESI	Assessment date: 2/10/10-Entrix, 3/20-23/11-ESI

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	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

<p>.500(6)(a) Location and Landscape Support</p> <p>w/o pres or current with</p> <p>7 8</p>	Restore hydrological connections to contiguous wetland systems
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>Upland (U) or Wetland (W) W</p> <p>w/o pres or current with</p> <p>6 7</p>	Improved water quality and restore historic hydrological flows
<p>.500(6)(c)Community structure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current with</p> <p>7 8</p>	Increased biodiversity, refuge and foraging habitat

Score = sum of above scores/30 (if uplands/20)	
current	with
0.6667	0.7667

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	0.7
Adjusted mitigation delta =	0.07
*use 1.0 for creation	

For impact assessment areas	
FL = delta x acres =	

Delta = [with-current]
0.1

If mitigation (creation or enhancement)			
Time Lag	Years	t-factor =	1.14
	5		
*Risk factor = (1 to 3, 0.25 increments)			1.5
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.0409

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

Site/Project Name Boarshead Ranch		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Activity Area 1, Lakes, Herbaceous Enhancement/Littoral Shelf	
FLUCFCs code 520		Further classification (optional)		Impact or Mitigation Site? MITIGATION	Assessment Area Size (Acres) 4.2
Basin/Watershed Name/Number Withlacoochee		Affected Waterbody (Class) Class III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Boarshead Ranch is located near the southwest corner of the Green Swamp, it abuts the Withlacoochee River and state-preserved lands to the east and the headwaters of the Hillsborough River to the South. This area is hydrologically connected to an offsite wetland and is surrounded by improved pasture and oak hammock.</p> <p>Assessment area description This lake community was formerly a marsh system that was excavated for peat mining activities. The wetland is hydrologically connected surrounding lakes via a ditch. It is also connected to offsite wetlands to the north. The area consists of open water with a floating vegetation dominated by water hyacinth and sparse pickerelweed. Side slopes are dominated by pasture grasses including bermuda grass, dog fennel, and frog fruit. The area is being targeted for enhancement to establish a more functional wetland characterized as a flatwood prairie lake.</p>					
Significant nearby features Green Swamp, Hillsborough River, Withlacoochee River, and state preserved lands.				Uniqueness (considering the relative rarity in relation to the regional) None	
Functions wildlife refuge and foraging, water quality treatment				Mitigation for previous permit/other historic use	
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to wading birds, reptiles, amphibians, large/medium mammals, possible fish habitat				Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the Wading birds (SSC), Osprey (SSC), Bald eagle (T)	
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): american alligator, osprey, bald eagle, yellow slider, black racer, water moccasin, brim and bass					
Additional relevant factors:					
Assessment conducted by: AMF/VAF-Entrix; Shannon Julien/Joe Brinson - ESI				Assessment date(s): 2/10/10-Entrix, 3/20-23/11-ESI	

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

MITIGATION

Site/Project Name Boarshead Ranch	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Activity Area 1, Lakes, Herbaceous Enhancement/Littoral Shelf
Impact or Mitigation Mitigation	Assessment conducted by: AMF/VAE-Entrix; Shannon Julien/Joe Brinson - ESI	Assessment date: 2/10/10-Entrix, 3/20-23/11-ESI

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 <input type="text" value="7"/> with <input type="text" value="8"/>	Improved habitat and water quality with the addition of littoral shelf
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) <input type="text" value="W"/> w/o pres or current <input type="text" value="5"/> with <input type="text" value="7"/>	Improved water quality with the addition of the littoral shelf
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current <input type="text" value="5"/> with <input type="text" value="7"/>	Increased biodiversity and additional refuge and foraging potential

Score = sum of above scores/30 (if uplands/20) current or w/o pres <input type="text" value="0.5667"/> with <input type="text" value="0.7333"/>

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	<input type="text"/>
Adjusted mitigation delta =	<input type="text"/>
*use 1.0 for creation	

For impact assessment areas
FL = delta x acres = <input type="text"/>

Delta = [with-current] 0.16666667

If mitigation (creation or enhancement)			
Time Lag	Years 11 – 15	t-factor =	1.14
*Risk factor = (1 to 3, 0.25 increments)			1.5
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.0975

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

Site/Project Name Boarshead Ranch		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Activity Area 1, Lakes (South), Herbaceous Preservation/WQ Enhancement	
FLUCFCs code 520		Further classification (optional)		Impact or Mitigation Site? MITIGATION	
				Assessment Area Size (Acres) 5.5	
Basin/Watershed Name/Number Withlacoochee		Affected Waterbody (Class) Class III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Boarshead Ranch is located near the southwest corner of the Green Swamp, it abuts the Withlacoochee River and state-preserved lands to the east and the headwaters of the Hillsborough River to the South. This area is hydrologically connected to an offsite wetland and is surrounded by improved pasture and oak hammock.</p>					
<p>Assessment area description</p> <p>This lake community was formerly a marsh system that was excavated for peat mining activities. The wetland is hydrologically connected surrounding lakes via a ditch. It is also connected to offsite wetlands to the north. The area consists of open water with a floating vegetation dominated by water hyacinth and sparse pickerelweed. Side slopes are dominated by pasture grasses including bermuda grass, dog fennel, and frog fruit. The area is being targeted for enhancement to establish a more functional wetland characterized as a flatwood prairie lake.</p>					
Significant nearby features Green Swamp, Hillsborough River, Withlacoochee River, and state preserved lands.			Uniqueness (considering the relative rarity in relation to the regional None		
Functions wildlife refuge and foraging, water treatment			Mitigation for previous permit/other historic use		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to wading birds, reptiles, amphibians, large/medium mammals, possible fish habitat			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the Wading birds (SSC), Osprey (SSC), Bald eagle (T)		
<p>Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):</p> <p>american alligator, osprey, bald eagle, yellow slider, black racer, water moccasin, brim and bass</p>					
Additional relevant factors:					
Assessment conducted by: AMF/VAF-Entrix; Shannon Julien/Joe Brinson - ESI			Assessment date(s): 2/10/10-Entrix, 3/20-23/11-ESI		

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

MITIGATION

Site/Project Name Boarshead Ranch	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Activity Area 1, Lakes (South), Herbaceous Preservation/WQ Enhancement
Impact or Mitigation Mitigation	Assessment conducted by: AMF/VAE-Entrix; Shannon Julien/Joe Brinson - ESI	Assessment date: 2/10/10-Entrix, 3/20-23/11-ESI

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 <div>7</div> <div>8</div>	Improved habitat and water quality with the addition of littoral shelf in conjunction to the open water environment
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) <div>W</div> w/o pres or current with <div>5</div> <div>6</div>	Hydrological restoration
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with <div>5</div> <div>7</div>	Increased biodiversity and additional refuge and foraging potential for aquatic dependent species

Score = sum of above scores/30 (if uplands/20) current or w/o pres with <div>0.5667</div> <div>0.7000</div>
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If preservation as mitigation, *Preservation adjustment factor = (0 to 1, 1/10th increments) Adjusted mitigation delta = *use 1.0 for creation	
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For impact assessment areas FL = delta x acres =	
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Delta = [with-current] <div>0.13333333</div>

If mitigation (creation or enhancement) Time Lag Years t-factor = 11 – 15 <div>1.14</div> *Risk factor = (1 to 3, 0.25 increments) *use 1.0 for preservation	<div>1</div>
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For mitigation assessment areas RFG = delta/(t-factor x risk) =	<div>0.1170</div>
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**PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)**

Site/Project Name Boarshead Ranch		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Activity Area 2, Wet Prairie (West), Cypress (West/South)&(West North), Forested Enhancement	
FLUCFCs code 643/621		Further classification (optional)		Impact or Mitigation Site? MITIGATION	Assessment Area Size (Acres) 9.3
Basin/Watershed Name/Number Withlacoochee		Affected Waterbody (Class) Class III		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 Boarshead Ranch is located near the southwest corner of the Green Swamp, it abuts the Withlacoochee River and state-preserved lands to the east and the headwaters of the Hillsborough River to the South. This area is surrounded by planted pine.					
Assessment area description This area consists of a low quality wet prairie community dominated by pasture grasses and sparse coverage of beakrush, coinwort and dog fennel. The area appeared to function as a depressional marsh system historically. The surrounding wetland areas contain a fair amount of cypress; therefore, the area is being targeted for enhancement to establish a cohesive wetland system characterized by cypress dome swamp.					
Significant nearby features Green Swamp, Hillsborough River, Withlacoochee River, and state preserved lands.				Uniqueness (considering the relative rarity in relation to the regional	
Functions wildlife refuge and foraging				Mitigation for previous permit/other historic use	
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to wading birds, reptiles, amphibians, large/medium mammals				Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the wading birds (SSC)	
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: AMF/DDS-Entrix; Shannon Julien, Joe Brinson- ESI				Assessment date(s): 3/12/10-Entrix; 3/20-23/11- ESI	

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

MITIGATION

Site/Project Name Boarshead Ranch	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Activity Area 2, Wet Prairie (West), Cypress (West/South)&(West North), Forested Enhancement
Impact or Mitigation Mitigation	Assessment conducted by: AMF/DDS-EntriX; Shannon Julien, Joe Brinson- ESI	Assessment date: 3/12/10-EntriX; 3/20-23/11- ESI

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 water functions	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 8	By restoring historic conditions and enhancing wetlands, there is increased connectivity to adjacent wetland habitats
.500(6)(b) Water Environment (n/a for uplands) Upland (U) or Wetland (W) W w/o pres or current with 5 7	Restore historic wetland conditions and hydroperiods
.500(6)(c) Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 5 8	Restored vegetative communities, increased foraging and refuge

Score = sum of above scores/30 (if uplands/20) current or w/o pres with 0.5333 0.7667
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If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	
Adjusted mitigation delta =	
*use 1.0 for creation	

For impact assessment areas
FL = delta x acres =

Delta = [with-current] 0.23333333
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If mitigation (creation or enhancement)		
Time Lag	Years 11 – 15	t-factor = 1.14
*Risk factor = (1 to 3, 0.25 increments)		1
*use 1.0 for preservation		

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.2047

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

Site/Project Name Boarshead Ranch		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Activity Area 2, Cypress (East/North, Central & South), Forested Enhancement	
FLUCFCs code 621		Further classification (optional)		Impact or Mitigation Site? MITIGATION	Assessment Area Size (Acres) 2.2
Basin/Watershed Name/Number Withlacoochee		Affected Waterbody (Class) Class III		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 Boarshead Ranch is located near the southwest corner of the Green Swamp, it abuts the Withlacoochee River and state-preserved lands to the east and the headwaters of the Hillsborough River to the South. This area is adjacent to pine flatwoods and pine plantation					
Assessment area description This area consists of a logged cypress swamp with low to moderate coverage of cypress remaining. Laurel oak, red maple, water tupelo and slash pine have also become established in the wetland. The wetland also contains sparse coverage of shrub and herbaceous species including saltbush, Virginia chain fern and sedges. The area is being targeted for enhancement to establish a more functional cypress dome swamp.					
Significant nearby features Green Swamp, Hillsborough River, Withlacoochee River, and state preserved lands.				Uniqueness (considering the relative rarity in relation to the regional	
Functions Wildlife refuge and foraging, water attenuation				Mitigation for previous permit/other historic use	
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to wading birds, reptiles, amphibians, large/medium mammals				Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the wading birds (SSC)	
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: AMF/DDS-Entrix; Shannon Julien, Joe Brinson- ESI				Assessment date(s): 2/10/10-Entrix, 3/20-23/11-ESI	

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

MITIGATION

Site/Project Name Boarshead Ranch	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Activity Area 2, Cypress (East/North, Central & South), Forested Enhancement
Impact or Mitigation Mitigation	Assessment conducted by: AMF/DDS-Entrix; Shannon Julien, Joe Brinson- ESI	Assessment date: 3/12/10-Entrix; 3/20-23/11- ESI

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 <div>6</div> <div>with</div> <div>8</div>	Improved connectivity with larger wetland systems
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) <div>W</div> w/o pres or current <div>4</div> <div>with</div> <div>7</div>	Restored hydrologic conditions and connectivity to adjacent wetlands
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current <div>5</div> <div>with</div> <div>8</div>	Restored vegetation, increased refuge and foraging habitat

Score = sum of above scores/30 (if uplands/20) current or w/o pres with	
<div>0.5000</div> <div>0.7667</div>	

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	
Adjusted mitigation delta =	
*use 1.0 for creation	

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
0.26666667

If mitigation (creation or enhancement)			
Time Lag	Years 11 – 15	t-factor =	1.25
*Risk factor = (1 to 3, 0.25 increments)			1
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.2133

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

Site/Project Name Boarshead Ranch		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Activity Area 2, Pine Plantation, Herbaceous Creation	
FLUCFCs code 440		Further classification (optional) upland		Impact or Mitigation Site? MITIGATION	
				Assessment Area Size (Acres) 2.8	
Basin/Watershed Name/Number Withlacoochee		Affected Waterbody (Class) Class III		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 Boarshead Ranch is located near the southwest corner of the Green Swamp, it abuts the Withlacoochee River and state-preserved lands to the east and the headwaters of the Hillsborough River to the South. This area abuts cypress domes and is surrounded by pine flatwoods.					
Assessment area description This area consists of planted pine that offers minimal habitat value and is being targeted for wetland creation to establish a wet prairie community					
Significant nearby features Green Swamp, Hillsborough River, Withlacoochee River, and state preserved lands.				Uniqueness (considering the relative rarity in relation to the regional)	
Functions wildlife refuge and foraging				Mitigation for previous permit/other historic use	
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to wading birds, reptiles, amphibians, large/medium mammals				Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the wading birds (SSC)	
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: AMF/DDS-Entrix; Shannon Julien, Joe Brinson- ESI				Assessment date(s): 3/12/10-Entrix; 3/20-23/11- ESI	

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

MITIGATION

Site/Project Name Boarshead Ranch	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Activity Area 2, Pine Plantation, Herbaceous Creation
Impact or Mitigation Mitigation	Assessment conducted by: AMF/DDS-Entrix; Shannon Julien, Joe Brinson- ESI	Assessment date: 3/12/10-Entrix; 3/20-23/11- ESI

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 0 8	Increased wetland connectivity and overall landscape support for wildlife
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) W w/o pres or current with 0 7	restore historic hydrological conditions via wetland creation and increase wetland connectivity
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 0 8	Increased biodiversity, restored wildlife habitat

Score = sum of above scores/30 (if uplands/20) current or w/o pres with 0.0000 0.7667
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If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	
Adjusted mitigation delta =	
*use 1.0 for creation	

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
0.766666667

If mitigation (creation or enhancement)			
Time Lag	Years	t-factor =	1.46
	11 – 15		
*Risk factor = (1 to 3, 0.25 increments)			1.75
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.3001

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

Site/Project Name Boarshead Ranch		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Activity Area 2, Cropland and Pastureland, Herbaceous Creation
FLUCFCs code 211	Further classification (optional) uplands	Impact or Mitigation Site? MITIGATION	Assessment Area Size (Acres) 5.7
Basin/Watershed Name/Number Withlacoochee	Affected Waterbody (Class) Class III	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Boarshead Ranch is located near the southwest corner of the Green Swamp, it abuts the Withlacoochee River and state-preserved lands to the east and the headwaters of the Hillsborough River to the South. This area is surrounded by planted pine and pine flatwoods</p>			
<p>Assessment area description</p> <p>This area consists of open pasture that has recently been cleared and sodded. It offers no habitat value; therefore, the area is being targeted as a wetland creation area to establish a functional wetland characterized by wet prairie.</p>			
Significant nearby features Green Swamp, Hillsborough River, Withlacoochee River, and state preserved lands.		Uniqueness (considering the relative rarity in relation to the regional	
Functions wildlife refuge and foraging		Mitigation for previous permit/other historic use	
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to wading birds, reptiles, amphibians, large/medium mammals		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the wading birds (SSC)	
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: AMF/DDS-Entrix; Shannon Julien, Joe Brinson- ESI		Assessment date(s): 3/12/10-Entrix; 3/20-23/11- ESI	

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

MITIGATION

Site/Project Name Boarshead Ranch	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Activity Area 2, Cropland and Pastureland, Herbaceous Creation
Impact or Mitigation Mitigation	Assessment conducted by: AMF/DDS-Entrix; Shannon Julien, Joe Brinson- ESI	Assessment date: 3/12/10-Entrix; 3/20-23/11- ESI

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 0 with 8	Currently an upland, this creation area will allow for improved connectivity to adjacent wetlands and provide greater wildlife support in the landscape
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) W w/o pres or current 0 with 7	The creation of a wet prairie will re-establish historical hydrology and connectivity between wetlands
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 0 with 8	Increased biodiversity, improved wildlife habitat for refuge and foraging

Score = sum of above scores/30 (if uplands/20)	
current or w/o pres	with
0.0000	0.7667

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	
Adjusted mitigation delta =	
*use 1.0 for creation	

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
0.76666667

If mitigation (creation or enhancement)			
Time Lag	Years	t-factor =	1.46
	11 – 15		
*Risk factor = (1 to 3, 0.25 increments)			1.75
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.3001

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

Site/Project Name Boarshead Ranch		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Activity Area 2, Pine flatwoods, Forested Enhancement	
FLUCFCs code 411		Further classification (optional) upland		Impact or Mitigation Site? MITIGATION	
				Assessment Area Size (Acres) 10	
Basin/Watershed Name/Number Withlacoochee		Affected Waterbody (Class) Class III		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 Boarshead Ranch is located near the southwest corner of the Green Swamp, it abuts the Withlacoochee River and state-preserved lands to the east and the headwaters of the Hillsborough River to the South. This area is surrounded by planted pine and pine flatwoods					
Assessment area description This area consists of a pine flatwoods community that encompasses a few isolated cypress dome swamps. The area has been subjected to logging and is being targeted for wetland creation to establish a wet flatwoods community.					
Significant nearby features Green Swamp, Hillsborough River, Withlacoochee River, and state preserved lands.				Uniqueness (considering the relative rarity in relation to the regional	
Functions wildlife refuge and foraging				Mitigation for previous permit/other historic use	
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to wading birds, reptiles, amphibians, large/medium mammals				Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the wading birds (SSC)	
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: AMF/DDS-Entrix; Shannon Julien, Joe Brinson- ESI				Assessment date(s): 3/12/10-Entrix; 3/20-23/11- ESI	

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

MITIGATION

Site/Project Name Boarshead Ranch	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Activity Area 2, Pine flatwoods, Forested Enhancement
Impact or Mitigation Mitigation	Assessment conducted by: AMF/DDS-Entrix; Shannon Julien, Joe Brinson- ESI	Assessment date: 3/12/10-Entrix; 3/20-23/11- ESI

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 0 with 8	Conversion to wet pine plantation will restore historical wetlands and connectivity to adjacent wetlands
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) W w/o pres or current 0 with 7	Restored hydroperiods and habitats
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 0 with 8	Increased biodiversity, improved wildlife refuge and foraging habitat

Score = sum of above scores/30 (if uplands/20) current or w/o pres 0.0000 with 0.7667
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If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	
Adjusted mitigation delta =	
*use 1.0 for creation	

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
0.766666667

If mitigation (creation or enhancement)			
Time Lag	Years	t-factor =	1.92
	21 – 25		
*Risk factor = (1 to 3, 0.25 increments)			1.5
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.2662

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

Site/Project Name Boarshead Ranch		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Activity Area 3, Lake, Herbaceous Enhancement	
FLUCFCs code 520/510		Further classification (optional) open water system including large lake and ditches		Impact or Mitigation Site? MITIGATION	
				Assessment Area Size (Acres) 53.2	
Basin/Watershed Name/Number Withlacoochee		Affected Waterbody (Class) Class III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Boarshead Ranch is located near the southwest corner of the Green Swamp, it abuts the Withlacoochee River and state-preserved lands to the east and the headwaters of the Hillsborough River to the South. This area is adjacent to wet prairie to the south and surrounded by crop and pastureland, cypress and oak hammock.</p>					
<p>Assessment area description This area consists of a man-made lake and ditch system that was excavated from a historic depressional marsh system as part of the peat mining operations on the site. The lake contains two littoral zones isolated by berms which function as depressional marsh wetland. The area is being targeted for hydrologic enhancement, but will ultimately be maintained as open water characterized by a river floodplain lake community.</p>					
Significant nearby features Green Swamp, Hillsborough River, Withlacoochee River, and state preserved lands.				Uniqueness (considering the relative rarity in relation to the regional)	
Functions wildlife refuge and foraging				Mitigation for previous permit/other historic use	
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to wading birds, reptiles, amphibians, large/medium mammals, fish				Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the wading birds (SSC)	
<p>Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): sandhill cranes, osprey</p>					
Additional relevant factors:					
Assessment conducted by: AMF/DDS-Entrix; Shannon Julien, Joe Brinson- ESI				Assessment date(s): 3/12/10-Entrix; 3/20-23/11- ESI	

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

MITIGATION

Site/Project Name Boarshead Ranch	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Activity Area 3, Lake, Herbaceous Enhancement
Impact or Mitigation Mitigation	Assessment conducted by: AMF/DDS-Entrix; Shannon Julien, Joe Brinson- ESI	Assessment date: 3/12/10-Entrix; 3/20-23/11- ESI

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

<div>.500(6)(a) Location and Landscape Support</div> <div>Improved flood storage and connectivity with surrounding mitigation activities</div>	
<div>w/o pres or current</div> <div>7</div> <div>with</div> <div>8</div>	
<div>.500(6)(b)Water Environment (n/a for uplands)</div> <div>Improved water quality with the abatement of agricultural activities and enhancement of surrounding wetlands. Restore hystorical flow by altering ditch systems draining into the lake.</div>	
<div>Upland (U) or Wetland (W)</div> <div>W</div> <div>w/o pres or current</div> <div>5</div> <div>with</div> <div>7</div>	
<div>.500(6)(c)Community structure</div> <div>Improved wildlife habitat and biodiversity</div>	
<div>1. Vegetation and/or 2. Benthic Community</div> <div>w/o pres or current</div> <div>5</div> <div>with</div> <div>7</div>	

Score = sum of above scores/30 (if uplands/20) current or w/o pres	with
0.5667	0.7333

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	
Adjusted mitigation delta =	
*use 1.0 for creation	

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
0.16666667

If mitigation (creation or enhancement)			
Time Lag	Years	t-factor =	1.14
	5		
*Risk factor = (1 to 3, 0.25 increments)			1.25
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.1170

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

Site/Project Name Boarshead Ranch		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Activity Area 4, Cypress (Southwest & North), Forested Preservation	
FLUCFCs code 621		Further classification (optional)		Impact or Mitigation Site? MITIGATION	
				Assessment Area Size (Acres) 13.8	
Basin/Watershed Name/Number Withlacoochee		Affected Waterbody (Class) Class III		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 Boarshead Ranch is located near the southwest corner of the Green Swamp, it abuts the Withlacoochee River and state-preserved lands to the east and the headwaters of the Hillsborough River to the South. This area is surrounded by pine flatwoods.					
Assessment area description This area consists of two cypress dome swamps with moderate coverage of cypress intermixed with sparse red maple and water tupelo and moderate coverage of herbaceous species dominated by maidencane. The wetland shows signs of hydrologic stress based on the dead/fallen cypress. However, the area is largely in tact and is being targeted for preservation.					
Significant nearby features Green Swamp, Hillsborough River, Withlacoochee River, and state preserved lands.				Uniqueness (considering the relative rarity in relation to the regional	
Functions wildlife refuge and foraging, water attenuation				Mitigation for previous permit/other historic use	
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to wading birds, reptiles, amphibians, large/medium mammals				Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the wading birds (SSC)	
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): white tailed deer, tracks					
Additional relevant factors:					
Assessment conducted by: AMF/VAF-Entrix; Shannon Julien/Joe Brinson - ESI				Assessment date(s): 2/10/10-Entrix, 3/20-23/11-ESI	

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

MITIGATION

Site/Project Name Boarshead Ranch	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Activity Area 4, Cypress (Southwest & North), Forested Preservation
Impact or Mitigation Mitigation	Assessment conducted by: AMF/VAE-Entrix; Shannon Julien/Joe Brinson - ESI	Assessment date: 2/10/10-Entrix, 3/20-23/11-ESI

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 <div>7</div> <div>with</div> <div>8</div>	Improved protection and interconnectivity of surrounding wetlands
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) <div>W</div> w/o pres or current <div>5</div> <div>with</div> <div>6</div>	Improved historical hydrology
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current <div>4</div> <div>with</div> <div>8</div>	Increased biodiversity and wildlife habitat

Score = sum of above scores/30 (if uplands/20) current or w/o pres <div>0.5333</div> <div>with</div> <div>0.7333</div>

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	0.7
Adjusted mitigation delta =	0.14
*use 1.0 for creation	

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
0.2

If mitigation (creation or enhancement)			
Time Lag	Years	t-factor =	1.14
	5		
*Risk factor = (1 to 3, 0.25 increments)			1
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.1228

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

Site/Project Name Boarshead Ranch		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Activity Area 4, Cypress (Central), Forested Preservation
FLUCFCs code 621	Further classification (optional)	Impact or Mitigation Site? MITIGATION	Assessment Area Size (Acres) 0.4
Basin/Watershed Name/Number Withlacoochee	Affected Waterbody (Class) Class III	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 Boarshead Ranch is located near the southwest corner of the Green Swamp, it abuts the Withlacoochee River and state-preserved lands to the east and the headwaters of the Hillsborough River to the South. This area is surrounded by pine flatwoods.			
Assessment area description This area consists of a small cypress dome swamp with moderate coverage of cypress intermixed with sparse red maple and water tupelo and moderate coverage of herbaceous species dominated by maidencane. The wetland shows signs of hydrologic stress based on the dead/fallen cypress. However, the area is largely in tact and is being targeted for preservation.			
Significant nearby features Green Swamp, Hillsborough River, Withlacoochee River, and state preserved lands.		Uniqueness (considering the relative rarity in relation to the regional	
Functions wildlife refuge and foraging, water attenuation		Mitigation for previous permit/other historic use	
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to wading birds, reptiles, amphibians, large/medium mammals		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the wading birds (SSC)	
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): white tailed deer, tracks			
Additional relevant factors:			
Assessment conducted by: AMF/VAE-Entrix; Shannon Julien/Joe Brinson - ESI		Assessment date(s): 2/10/10-Entrix, 3/20-23/11-ESI	

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

MITIGATION

Site/Project Name Boarshead Ranch	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Activity Area 4, Cypress (Central), Forested Preservation
Impact or Mitigation Mitigation	Assessment conducted by: AMF/VAF-Entrix; Shannon Julien/Joe Brinson - ESI	Assessment date: 2/10/10-Entrix, 3/20-23/11-ESI

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 <div>7</div> <div>with</div> <div>8</div>	Improved protection and interconnectivity of surrounding wetlands
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) <div>W</div> w/o pres or current <div>5</div> <div>with</div> <div>6</div>	Improved historical hydrology
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current <div>4</div> <div>with</div> <div>8</div>	Increased biodiversity and wildlife habitat

Score = sum of above scores/30 (if uplands/20)
current or w/o pres
with
0.5333
0.7333

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	0.7
Adjusted mitigation delta =	0.14
*use 1.0 for creation	

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
0.2

If mitigation (creation or enhancement)			
Time Lag	Years 6 – 10	t-factor =	1.25
*Risk factor = (1 to 3, 0.25 increments)			1
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.1120

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

Site/Project Name Boarshead Ranch		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Activity Area 4, Stream and Lake Swamp/Bottomlands, Forested Preservation	
FLUCFCs code 615		Further classification (optional)		Impact or Mitigation Site? MITIGATION	Assessment Area Size (Acres) 7.5
Basin/Watershed Name/Number Withlacoochee		Affected Waterbody (Class) Class III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Boarshead Ranch is located near the southwest corner of the Green Swamp, it abuts the Withlacoochee River and state-preserved lands to the east and the headwaters of the Hillsborough River to the South. This area is surrounded by pine flatwoods.</p>					
<p>Assessment area description</p> <p>This area consists of a mixed forested wetland dominated by hardwoods including laurel oak, red maple, water tupelo and cypress. The wetland has moderate coverage of herbaceous species dominated by maidencane and broomsedge. The area is largely in tact and is being targeted for preservation.</p>					
Significant nearby features Green Swamp, Hillsborough River, Withlacoochee River, and state preserved lands.				Uniqueness (considering the relative rarity in relation to the regional	
Functions wildlife refuge and foraging, water attenuation, flood storage				Mitigation for previous permit/other historic use	
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to				Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the	
wading birds, reptiles, amphibians, large/medium mammals				wading birds (SSC)	
<p>Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):</p> <p align="center">white tailed deer, tracks</p>					
Additional relevant factors:					
Assessment conducted by: AMF/VAF-Entrix; Shannon Julien/Joe Brinson - ESI				Assessment date(s): 2/10/10-Entrix, 3/20-23/11-ESI	

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

MITIGATION

Site/Project Name Boarshead Ranch	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Activity Area 4, Stream and Lake Swamp/Bottomlands, Forested Preservation
Impact or Mitigation Mitigation	Assessment conducted by: AMF/VAF-Entrix; Shannon Julien/Joe Brinson - ESI	Assessment date: 2/10/10-Entrix, 3/20-23/11-ESI

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 <div>7</div> <div>8</div>	Increased protection in the landscape
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) <div>W</div> w/o pres or current <div>7</div> <div>8</div>	Increased flood storage, water attenuation, and preservation of historic hydrologic conditions
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current <div>4</div> <div>8</div>	Increased wildlife protection, foraging and refuge habitat for both wetland and wetland dependent species, increased wildlife corridor

Score = sum of above scores/30 (if uplands/20) current or w/o pres with	
<div>0.6000</div> <div>0.8000</div>	

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	0.7
Adjusted mitigation delta =	0.14
*use 1.0 for creation	

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
0.2

If mitigation (creation or enhancement)			
Time Lag	Years	t-factor =	1.14
	5		
*Risk factor = (1 to 3, 0.25 increments)			1
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.1228

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

Site/Project Name Boarshead Ranch		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Activity Area 3, Cropland and Pasture (North), Herbaceous Restoration	
FLUCFCs code 210		Further classification (optional) upland		Impact or Mitigation Site? MITIGATION	
Assessment Area Size (Acres) 37.1					
Basin/Watershed Name/Number Hillsborough		Affected Waterbody (Class) Class III		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 Boarshead Ranch is located near the southwest corner of the Green Swamp, it abuts the Withlacoochee River and state-preserved lands to the east and the headwaters of the Hillsborough River to the South. This area is surrounded by pine flatwoods, croplands, cypress and lakes.					
Assessment area description This area was historic marshland that has been converted to agricultural uses and is mowed and maintained.					
Significant nearby features Green Swamp, Hillsborough River, Withlacoochee River, and state preserved lands.				Uniqueness (considering the relative rarity in relation to the regional)	
Functions wildlife foraging				Mitigation for previous permit/other historic use	
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to)				Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the)	
small to large mammals, birds				Wading birds (SSC)	
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): None					
Additional relevant factors:					
Assessment conducted by: Shannon Julien and Joe Brinson - ESI				Assessment date(s): 3/20-23/11	

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

MITIGATION

Site/Project Name Boarshead Ranch	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Activity Area 3, Cropland and Pasture (North), Herbaceous Restoration
Impact or Mitigation Mitigation	Assessment conducted by: Shannon Julien, Joe Brinson - ESI	Assessment date: 3/20-23/11

Scoring Guidance	Optimal (10)	Moderate (7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	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 8	Restoration of historic conditions to support overall adjacent wetlands and landscape habitats
.500(6)(b) Water Environment (n/a for uplands) Upland (U) or Wetland (W) W w/o pres or current with 3 7	Restore historic hydrological conditions, soils still hydric to restore wet prairie conditions and improve water attenuation, water quality, and flood storage
.500(6)(c) Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 4 7	Increased biodiversity, improved wildlife refuge and foraging

Score = sum of above scores/30 (if uplands/20)	
current	with
0.4333	0.7333

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	
Adjusted mitigation delta =	
*use 1.0 for creation	

For impact assessment areas	
FL = delta x acres =	

Delta = [with-current]
0.3

If mitigation (creation or enhancement)		
Time Lag	Years 6 – 10	t-factor = 1.25
*Risk factor = (1 to 3, 0.25 increments)		1.25
*use 1.0 for preservation		

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.1920

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

Site/Project Name Boarshead Ranch		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Activity Area 3, Cropland and Pastureland (South), Herbaceous Restoration	
FLUCFCs code 210		Further classification (optional) upland		Impact or Mitigation Site? MITIGATION	
				Assessment Area Size (Acres) 50	
Basin/Watershed Name/Number Hillsborough		Affected Waterbody (Class) Class III		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 Boarshead Ranch is located near the southwest corner of the Green Swamp, it abuts the Withlacoochee River and state-preserved lands to the east and the headwaters of the Hillsborough River to the South. This area is surrounded by pine flatwoods, planted pine, and wet prairie.					
Assessment area description This area was previously a named lake that has dried out and been converted to pastureland. The area is of low quality as it is mowed and maintained pasture.					
Significant nearby features Green Swamp, Hillsborough River, Withlacoochee River, and state preserved lands.			Uniqueness (considering the relative rarity in relation to the regional		
Functions wildlife foraging, flood storage			Mitigation for previous permit/other historic use		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to small to large mammals, birds			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the Wading birds (SSC)		
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: AMF/VAF-Entrix; Shannon Julien/Joe Brinson - ESI			Assessment date(s): 2/15/10 - Entrix; 3/20-23/11 - ESI		

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

MITIGATION

Site/Project Name Boarshead Ranch	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Activity Area 3, Cropland and Pastureland (South), Herbaceous Restoration
Impact or Mitigation Mitigation	Assessment conducted by: AMF/VAF-Entrix; Shannon Julien/Joe Brinson - ESI	Assessment date: 2/15/10 - Entrix; 3/20-23/11 - ESI

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 <div>6</div> <div>with</div> <div>7</div>	Restoration of historic conditions to support overall adjacent wetlands and landscape habitats
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) <div>W</div> w/o pres or current <div>5</div> <div>with</div> <div>7</div>	Restore historic hydrological conditions, soils still hydric to restore wet prairie conditions and improve water attenuation, water quality, and flood storage
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current <div>4</div> <div>with</div> <div>7</div>	Increased biodiversity, improved wildlife refuge and foraging

Score = sum of above scores/30 (if uplands/20)
current or w/o pres
<div>0.5000</div> <div>with</div> <div>0.7000</div>

If preservation as mitigation,
*Preservation adjustment factor = (0 to 1, 1/10th increments)
Adjusted mitigation delta =
*use 1.0 for creation

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
0.2

If mitigation (creation or enhancement)			
Time Lag	Years	t-factor =	1.25
	6 – 10		
*Risk factor = (1 to 3, 0.25 increments)			1.25
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.1280

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

Site/Project Name Boarshead Ranch		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Activity Area 3, Pine Plantation (West, North & South), Herbaceous Creation	
FLUCFCs code 440		Further classification (optional) upland		Impact or Mitigation Site? MITIGATION	
				Assessment Area Size (Acres) 15.4	
Basin/Watershed Name/Number Hillsborough		Affected Waterbody (Class) Class III		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 Boarshead Ranch is located near the southwest corner of the Green Swamp, it abuts the Withlacoochee River and state-preserved lands to the east and the headwaters of the Hillsborough River to the South. This area is surrounded by cropland slated for wet prairie.					
Assessment area description This low quality habitat was historically wet prairie that was converted to silvicultural operations. The area is dominated by slash pine with little to no understory vegetation. The targeted community is wet prairie.					
Significant nearby features Green Swamp, Hillsborough River, Withlacoochee River, and state preserved lands.				Uniqueness (considering the relative rarity in relation to the regional	
Functions wildlife refuge and foraging				Mitigation for previous permit/other historic use	
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to small to large mammals, birds				Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the wading birds (SSC)	
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: AMF/DDS-Entrix; Shannon Julien, Joe Brinson- ESI				Assessment date(s): 3/12/10-Entrix; 3/20-23/11- ESI	

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

MITIGATION

Site/Project Name Boarshead Ranch	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Activity Area 3, Pine Plantation (West, North & South), Herbaceous Creation
Impact or Mitigation Mitigation	Assessment conducted by: AMF/DDS-Entrix; Shannon Julien, Joe Brinson- ESI	Assessment date: 2/15/10 - Entrix; 3/20-23/11 - ESI

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 0 with 8	Upland taken out of use and restored to historical conditions to improve support of surrounding wetlands
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) W w/o pres or current 0 with 7	Restore historic wetland habitat, increase flood storage, water attenuation and water quality
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 0 with 8	Increased biodiversity, improved wildlife refuge and foraging habitat

Score = sum of above scores/30 (if uplands/20)
current or w/o pres 0.0000 with 0.7667

If preservation as mitigation,
*Preservation adjustment factor = (0 to 1, 1/10th increments)
Adjusted mitigation delta =
*use 1.0 for creation

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
0.76666667

If mitigation (creation or enhancement)			
Time Lag	Years	t-factor =	1.46
	11 – 15		
*Risk factor = (1 to 3, 0.25 increments)			1.5
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.3501

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

Site/Project Name Boarshead Ranch		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Activity Area 3, Wet Prairie, Herbaceous Enhancement	
FLUCFCs code 643		Further classification (optional)		Impact or Mitigation Site? MITIGATION	Assessment Area Size (Acres) 0.2
Basin/Watershed Name/Number Hillsborough		Affected Waterbody (Class) Class III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Boarshead Ranch is located near the southwest corner of the Green Swamp, it abuts the Withlacoochee River and state-preserved lands to the east and the headwaters of the Hillsborough River to the South. This area is surrounded by cropland slated for wet prairie and tree plantation targeted for wet prairie.</p>					
<p>Assessment area description This moderate quality wetland is a small remnant of wet prairie that once encompassed this area. The area is dominated by maidencane and targeted for enhancement.</p>					
Significant nearby features Green Swamp, Hillsborough River, Withlacoochee River, and state preserved lands.				Uniqueness (considering the relative rarity in relation to the regional	
Functions wildlife refuge and foraging				Mitigation for previous permit/other historic use	
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to small to large mammals, birds, reptiles, amphibians				Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the wading birds (SSC)	
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: AMF/VAF-Entrix; Shannon Julien/Joe Brinson - ESI				Assessment date(s): 2/15/10 - Entrix; 3/20-23/11 - ESI	

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

MITIGATION

Site/Project Name Boarshead Ranch	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Activity Area 3, Wet Prairie, Herbaceous Enhancement
Impact or Mitigation Mitigation	Assessment conducted by: AMF/VAE-Entrix; Shannon Julien/Joe Brinson - ESI	Assessment date: 2/15/10 - Entrix; 3/20-23/11 - ESI

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 <div>6</div> <div>with</div> <div>8</div>	Restoration of this and surrounding upland habitats to wetlands will improve the overall connectivity and historic conditions in the landscape.
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) <div>W</div> w/o pres or current <div>5</div> <div>with</div> <div>7</div>	Improved water quality, water attenuation and flood storage
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current <div>6</div> <div>with</div> <div>8</div>	Increased biodiversity, wildlife refuge and foraging

Score = sum of above scores/30 (if uplands/20)
current
or w/o pres
<div>0.5667</div>
with
<div>0.7667</div>

If preservation as mitigation,
*Preservation adjustment factor = (0 to 1, 1/10th increments)
Adjusted mitigation delta =
*use 1.0 for creation

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
<div>0.2</div>

If mitigation (creation or enhancement)
Time Lag
Years
6 – 10
t-factor =
<div>1.25</div>
*Risk factor = (1 to 3, 0.25 increments)
<div>1</div>
*use 1.0 for preservation

For mitigation assessment areas
RFG = delta/(t-factor x risk) =
<div>0.1600</div>

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

Site/Project Name Boarshead Ranch		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Activity Area 3, Cypress Preservation, Forested Preservation	
FLUCFCs code 621		Further classification (optional)		Impact or Mitigation Site? MITIGATION	
				Assessment Area Size (Acres) 1.1	
Basin/Watershed Name/Number Hillsborough		Affected Waterbody (Class) Class III		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 Boarshead Ranch is located near the southwest corner of the Green Swamp, it abuts the Withlacoochee River and state-preserved lands to the east and the headwaters of the Hillsborough River to the South. This area is surrounded by cropland slated for wet prairie and lake.					
Assessment area description This moderate quality wetland is a small remnant of forested wetlands on elevated knolls adjacent to wet prairie. The area is dominated by cypress and maidencane.					
Significant nearby features Green Swamp, Hillsborough River, Withlacoochee River, and state preserved lands.				Uniqueness (considering the relative rarity in relation to the regional)	
Functions wildlife refuge and foraging				Mitigation for previous permit/other historic use	
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to small to large mammals, birds, reptiles, amphibians				Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the wading birds (SSC)	
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: Shannon Julien, Joe Brinson - ESI				Assessment date(s): 3/20-23/11	

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

MITIGATION

Site/Project Name Boarshead Ranch	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Activity Area 3, Cypress Preservation, Forested Preservation
Impact or Mitigation Mitigation	Assessment conducted by: Shannon Julien, Joe Brinson - ESI	Assessment date: 3/20-23/11

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 <input type="text" value="6"/> with <input type="text" value="8"/>	Preservation of this and surrounding upland habitats targeted for wetlands will improve the overall connectivity and historic conditions in the landscape.
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) <input type="text" value="W"/> w/o pres or current <input type="text" value="5"/> with <input type="text" value="7"/>	Improved water quality, water attenuation and flood storage
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current <input type="text" value="4"/> with <input type="text" value="8"/>	Increased biodiversity, wildlife refuge and foraging

Score = sum of above scores/30 (if uplands/20)
current <input type="text" value="0.5000"/> with <input type="text" value="0.7667"/>

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	<input type="text" value="0.7"/>
Adjusted mitigation delta =	0.186667
*use 1.0 for creation	

For impact assessment areas
FL = delta x acres = <input type="text"/>

Delta = [with-current]
0.26666667

If mitigation (creation or enhancement)			
Time Lag	Years <input type="text" value="5"/>	t-factor =	1.14
*Risk factor = (1 to 3, 0.25 increments)			<input type="text" value="1"/>
*use 1.0 for preservation			

For mitigation assessment areas
RFG = delta/(t-factor x risk) = 0.1637

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

Site/Project Name Boarshead Ranch		Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)		Assessment Area Name or Number Activity Area 3, Cypress Restoration, Forested Restoration	
FLUCFCs code 621		Further classification (optional)		Impact or Mitigation Site? MITIGATION	Assessment Area Size (Acres) 5.5
Basin/Watershed Name/Number Hillsborough		Affected Waterbody (Class) Class III		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 Boarshead Ranch is located near the southwest corner of the Green Swamp, it abuts the Withlacoochee River and state-preserved lands to the east and the headwaters of the Hillsborough River to the South. This area is surrounded by cropland slated for wet prairie, cypress and lake.					
Assessment area description This low quality wetland is adjacent to existing cypress and appears to have been timbered and converted to cropland.					
Significant nearby features Green Swamp, Hillsborough River, Withlacoochee River, and state preserved lands.				Uniqueness (considering the relative rarity in relation to the regional)	
Functions wildlife refuge and foraging				Mitigation for previous permit/other historic use	
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to small to large mammals, birds, reptiles, amphibians				Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the wading birds (SSC)	
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: Shannon Julien, Joe Brinson - ESI				Assessment date(s): 3/20-23/11	

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

MITIGATION

Site/Project Name Boarshead Ranch	Application Number SAJ-2008-00490 (Corps), PA08-51C (FDEP)	Assessment Area Name or Number Activity Area 3, Cypress Restoration, Forested Restoration
Impact or Mitigation Mitigation	Assessment conducted by: Shannon Julien, Joe Brinson - ESI	Assessment date: 3/20-23/11

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	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 <input type="text" value="6"/> with <input type="text" value="8"/>	Restoration of this and surrounding upland and wetland habitats targeted will improve the overall connectivity and historic conditions in the landscape.
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) <input type="text" value="W"/> w/o pres or current <input type="text" value="5"/> with <input type="text" value="7"/>	Improved water quality, water attenuation and flood storage
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current <input type="text" value="4"/> with <input type="text" value="8"/>	Increased biodiversity, wildlife refuge and foraging

Score = sum of above scores/30 (if uplands/20)
current <input type="text" value="0.5000"/> with <input type="text" value="0.7667"/>

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	<input type="text" value="1.0"/>
Adjusted mitigation delta =	<input type="text" value="0.26666667"/>
*use 1.0 for creation	

For impact assessment areas
FL = delta x acres = <input type="text" value="0.26666667"/>

Delta = [with-current]
0.26666667

If mitigation (creation or enhancement)			
Time Lag	Years	t-factor =	1.25
	11 – 15		
*Risk factor = (1 to 3, 0.25 increments)			1.25
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.1707

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

Site/Project Name Brooker Creek Preserve		Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)		Assessment Area Name or Number Wetland Enhancement (treatment and planting)	
FLUCFCs code 641/643		Further classification (optional)		Impact or Mitigation Site? MITIGATION	Assessment Area Size (Acres) 33
Basin/Watershed Name/Number Tampa Bay		Affected Waterbody (Class) Class III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Area represents several freshwater marsh areas underneath existing power line easement, some connect to various streams/tributaries that flow through the Preserve west into Tarpon Lake and ultimately into Gulf of Mexico.</p>					
<p>Assessment area description</p> <p>Areas currently exist as low quality freshwater marsh and wet prairie areas that contain various exotic/invasive species and some desirable aquatic species.</p>					
Significant nearby features Most areas connected to adjacent wetlands that eventually flow west into Brooker Creek and Tarpon Lake..			Uniqueness (considering the relative rarity in relation to the regional None		
Functions Water detention and conveyance, foraging and nesting habitat for wading birds and other wetland-dependent species.			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 Wading birds, numerous reptiles and amphibians			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the Wood Stork		
<p>Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):</p> <p>Turkey, White-tailed Deer, Raccoon, wild pig, diamond-back rattle snake, red corn snake, wood duck, great blue heron, ibis, snowy egret, red-tailed hawk, rabbit</p>					
Additional relevant factors:					
Assessment conducted by: Shirley Denton-Entrix; Ryan Talyor and Michael Stowe-ESI			Assessment date(s): 3/12/2010 - Entrix; 3/23/2011 - ESI		

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

MITIGATION

Site/Project Name Brooker Creek Preserve	Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)	Assessment Area Name or Number Wetland Enhancement (treatment and planting)
Impact or Mitigation Mitigation	Assessment conducted by: Shirley Denton-Entrix; Ryan Talyor and Michael Stowe-ESI	Assessment date: 3/12/2010 - Entrix; 3/23/2011 - ESI

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 <div>5</div> with <div>5</div>	Areas already serve as nesting, foraging and cover for wetland-dependent species within surrounding wetlands.
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) <div>W</div> w/o pres or current <div>7</div> with <div>7</div>	Areas already contain adequate hydrology and typically have standing water throughout the year. Most areas are supporting wetland-dependent species and the areas act as storage for surface runoff from surrounding areas.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current <div>5</div> with <div>8</div>	The proposed mitigation will include treating any invasive/exotic species present and then increasing diversity by planting numerous freshwater marsh species. This will increase the habitat diversity, offer additional food source and nesting options for wildlife, as well as attract additional benthic species.

Score = sum of above scores/30 (if uplands/20)	
current or w/o pres	with
0.5667	0.6667

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	
Adjusted mitigation delta =	
*use 1.0 for creation	

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
0.1

If mitigation (creation or enhancement)			
Time Lag	Years 3	t-factor =	1.07
*Risk factor = (1 to 3, 0.25 increments)			1.75
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.0534

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

Site/Project Name Brooker Creek Preserve		Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)		Assessment Area Name or Number Wetland Enhancement (treatment only)	
FLUCFCs code 621/630		Further classification (optional)		Impact or Mitigation Site? MITIGATION	
				Assessment Area Size (Acres) 10.5	
Basin/Watershed Name/Number Tampa Bay		Affected Waterbody (Class) Class III		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 Areas currently exists as functioning wetlands located adjacent to the Transmission line right-of-way, most are isolated wetlands, but do connect to nearby contiguous wetlands during periods of high inundation, wetlands flow west into Tarpon Lake and ultimately into Gulf of Mexico.					
Assessment area description All areas (except one) are isolated cypress domes that are well established, but have small populations of invasive/exotic species present within the portions that border the transmission line right-of-way. The proposed mitigation will treat these areas to prevent the invasive/exotic species from spreading.					
Significant nearby features Wetlands that feed into Brooker Creek and Tarpon Lake			Uniqueness (considering the relative rarity in relation to the regional None		
Functions Water detention, wildlife habitat, wading bird roosting			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 Wood Stork, Great Blue Heron, Snowy Egret, other wading birds, raptors, amphibians and reptiles			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the Wood Stork		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Turkey, White-tailed Deer, Raccoon, wild pig, diamond-back rattle snake, red corn snake, wood duck, great blue heron, ibis, snowy egret, red-tailed hawk, rabbit					
Additional relevant factors:					
Assessment conducted by: Shirley Denton-Entrix; Ryan Taylor and Michael Stowe-ESI			Assessment date(s): 3/12/2010 - Entrix; 3/23/2011 - ESI		

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

MITIGATION

Site/Project Name Brooker Creek Preserve	Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)	Assessment Area Name or Number Treatment Only Areas
Impact or Mitigation Mitigation	Assessment conducted by: Shirley Denton-Entrix; Ryan Talyor and Michael Stowe-ESI	Assessment date: 3/12/2010 - Entrix; 3/23/2011 - ESI

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	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 <div>7</div> with <div>8</div>	Treatment areas currently act as run-off storage from nearby uplands and also serve as nesting and foraging habitat for wetland dependent species. The removal of invasive/exotic species will increase the amount of desirable habitat and prevent the areas from further degradation.
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) <div>W</div> w/o pres or current <div>8</div> with <div>8</div>	The wetlands are currently well established and provide for water storage and detention, and also provide some fish habitat during periods of high inundation
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current <div>8</div> with <div>9</div>	Treatment of the existing invasive/exotic species will help reduce the possibility of infestation throughout the rest of the wetlands and will also allow for more desirable groundcover and sub-canopy species to establish

Score = sum of above scores/30 (if uplands/20)	
current or w/o pres	with
0.7667	0.8333

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	
Adjusted mitigation delta =	
*use 1.0 for creation	

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
0.06666667

If mitigation (creation or enhancement)			
Time Lag	Years < or = 1	t-factor =	1
*Risk factor = (1 to 3, 0.25 increments)			1.25
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.0533

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

Site/Project Name Brooker Creek Preserve		Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)		Assessment Area Name or Number Ditch Treatment	
FLUCFCs code 830		Further classification (optional)		Impact or Mitigation Site? MITIGATION	
				Assessment Area Size (Acres) 1.9	
Basin/Watershed Name/Number Tampa Bay		Affected Waterbody (Class) Class III		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 ditch receives water from the east as it flows west towards Gulf of Mexico, water is forced south through ditch and flows into wetlands to the south (during periods of high inundation), which eventually flow into Tarpon Lake and ultimately into Gulf of Mexico					
Assessment area description Area is a long linear ditch that is the result of constructing the adjacent access road, currently contains monoculture of cattails and provides little habitat diversity or functionality					
Significant nearby features Large wetland to east that drains into ditch, numerous adjacent wetlands to south			Uniqueness (considering the relative rarity in relation to the regional) None		
Functions Water storage and conveyance, some 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) Reptiles and amphibians			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Turkey, White-tailed Deer, Raccoon, wild pig, diamond-back rattle snake, red corn snake, wood duck, great blue heron, ibis, snowy egret, red-tailed hawk, rabbit					
Additional relevant factors:					
Assessment conducted by: Shirley Denton-Entrix; Ryan Talyor and Michael Stowe-ESI			Assessment date(s): 3/12/2010 - Entrix; 3/23/2011 - ESI		

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

MITIGATION

Site/Project Name Brooker Creek Preserve	Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)	Assessment Area Name or Number Ditch Treatment
Impact or Mitigation Mitigation	Assessment conducted by: Shirley Denton-Entrix; Ryan Talyor and Michael Stowe-ESI	Assessment date: 3/12/2010 - Entrix; 3/23/2011 - ESI

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	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

<p>.500(6)(a) Location and Landscape Support</p> <p>w/o pres or current with</p> <p>7 7</p>	<p>The ditch conveys water from large wetland to the east and helps to hydrate other adjacent wetlands. Area currently offers some habitat for wetland-dependent species.</p>
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>Upland (U) or Wetland (W) W</p> <p>w/o pres or current with</p> <p>7 7</p>	<p>The ditch currently contains sufficient aquatic habitat and is capable of supporting aquatic vegetation and wetland-dependent species</p>
<p>.500(6)(c)Community structure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current with</p> <p>5 8</p>	<p>The ditch currently contains a monoculture of cattails, the proposed mitigation will treat the existing cattails and allow for the establishment of more desirable freshwater marsh species which should attract more wildlife</p>

Score = sum of above scores/30 (if uplands/20)	
current	with
0.6333	0.7333

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	
Adjusted mitigation delta =	
*use 1.0 for creation	

For impact assessment areas	
FL = delta x acres =	

Delta = [with-current]
0.1

If mitigation (creation or enhancement)			
Time Lag	Years	t-factor =	1.07
	3		
*Risk factor = (1 to 3, 0.25 increments)			1.5
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.0623

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

Site/Project Name Brooker Creek Preserve		Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)		Assessment Area Name or Number Brooker North LWC	
FLUCFCs code 641		Further classification (optional)		Impact or Mitigation Site? MITIGATION	
				Assessment Area Size (Acres) 4	
Basin/Watershed Name/Number Tampa Bay		Affected Waterbody (Class) Class III		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 Area currently is freshwater marsh that connects a historic stream channel that flows from the east through Brooker Creek Preserve and eventually west towards Tarpon Lake and Gulf of Mexico					
Assessment area description The existing wetland contains a monoculture of cattails and is higher in elevation than the original stream footprint. The area does allow for some east to west flow, but does not efficiently convey water. The proposed mitigation will lower the existing elevation and introduce additional freshwater marsh species.					
Significant nearby features Adjacent wetlands and historic stream channels that flow west towards Gulf of Mexico				Uniqueness (considering the relative rarity in relation to the regional)	
Functions Currently provides some water storage and some wildlife habitat				Mitigation for previous permit/other historic use	
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to Wading birds, reptiles, amphibians, small fish				Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the Wood Stork	
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Turkey, White-tailed Deer, Raccoon, wild pig, diamond-back rattle snake, red corn snake, wood duck, great blue heron, ibis, snowy egret, red-tailed hawk, rabbit					
Additional relevant factors:					
Assessment conducted by: Shirley Denton-Entrix; Ryan Talyor and Michael Stowe-ESI				Assessment date(s): 3/12/2010 - Entrix; 3/23/2011 - ESI	

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

MITIGATION

Site/Project Name Brooker Creek Preserve	Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)	Assessment Area Name or Number Brooker North LWC
Impact or Mitigation Mitigation	Assessment conducted by: Shirley Denton-Entrix; Ryan Talyor and Michael Stowe-ESI	Assessment date: 3/12/2010 - Entrix; 3/23/2011 - ESI

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	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 <div>7</div> with <div>7</div>	The area acts as storage and conveyance for waters from the surrounding wetlands and supports wildlife as well.
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) <div>W</div> w/o pres or current <div>6</div> with <div>8</div>	The proposed mitigation will include lowering existing elevation and returning it to more historical conditions. This will allow for better water flow towards Gulf of Mexico and will better support aquatic and wetland-dependent species.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current <div>5</div> with <div>8</div>	The area currently exists as a monoculture of cattails and shallow water that supports little wildlife and has a poorly established benthic community. The proposed mitigation will lower existing elevation and result in additional pooled water, which should help to establish benthic community and attract additional wildlife.

Score = sum of above scores/30 (if uplands/20)	
current or w/o pres	with
0.6000	0.7667

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	
Adjusted mitigation delta =	
*use 1.0 for creation	

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
0.16666667

If mitigation (creation or enhancement)			
Time Lag	Years 3	t-factor =	1.07
*Risk factor = (1 to 3, 0.25 increments)			1.5
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.1038

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

Site/Project Name Brooker Creek Preserve		Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)		Assessment Area Name or Number Wetlands Adjacent to Brooker North LWC	
FLUCFCs code 630/621		Further classification (optional)		Impact or Mitigation Site? MITIGATION	Assessment Area Size (Acres) 7.6
Basin/Watershed Name/Number Tampa Bay		Affected Waterbody (Class) Class III		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 adjacent to proposed Brooker North LWC, part of historic stream channel that flows west into Gulf of Mexico					
Assessment area description Areas are forested wetlands adjacent to proposed Brooker North LWC, currently support some wildlife and wetland-dependent species.					
Significant nearby features Historic stream channel that flows into surrounding wetlands and eventually west into Gulf of Mexico			Uniqueness (considering the relative rarity in relation to the regional) None		
Functions Water detention and conveyance, 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 Wading birds, reptiles and amphibians			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Turkey, White-tailed Deer, Raccoon, wild pig, diamond-back rattle snake, red corn snake, wood duck, great blue heron, ibis, snowy egret, red-tailed hawk, rabbit					
Additional relevant factors:					
Assessment conducted by: Shirley Denton-Entrix; Ryan Talyor and Michael Stowe-ESI			Assessment date(s): 3/12/2010 - Entrix; 3/23/2011 - ESI		

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

MITIGATION

Site/Project Name Brooker Creek Preserve	Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)	Assessment Area Name or Number Wetlands Adjacent to Brooker North LWC
Impact or Mitigation Mitigation	Assessment conducted by: Shirley Denton-Entrix; Ryan Talyor and Michael Stowe-ESI	Assessment date: 3/12/2010 - Entrix; 3/23/2011 - ESI

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	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 <div>7</div> with <div>8</div>	The wetlands currently support some wildlife habitat for surrounding areas, also act as storage and conveyance for water in historic stream channel. The proposed mitigation will result in additional conveyance and storage as well increase habitat diversity.
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) <div>W</div> w/o pres or current <div>6</div> with <div>8</div>	The installation of the proposed LWC will result in better water flow through these wetlands. Additionally, the LWC will be a lower elevation and will help prevent staging up of water within the upstream wetlands.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current <div>7</div> with <div>8</div>	The introduction of additional water flow will allow for the better establishment of benthic and other wetland-dependent species. It will also result in establishment of additional aquatic species.

Score = sum of above scores/30 (if uplands/20)
current or w/o pres
with
<div>0.6667</div> <div>0.8000</div>

If preservation as mitigation,
*Preservation adjustment factor = (0 to 1, 1/10th increments)
Adjusted mitigation delta =
*use 1.0 for creation

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
0.13333333

If mitigation (creation or enhancement)			
Time Lag	Years	t-factor =	1
	< or = 1		
*Risk factor = (1 to 3, 0.25 increments)			1.25
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.1067

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

Site/Project Name Brooker Creek Preserve		Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)		Assessment Area Name or Number Brooker South LWC	
FLUCFCs code 641/830		Further classification (optional)		Impact or Mitigation Site? MITIGATION	Assessment Area Size (Acres) 4.5
Basin/Watershed Name/Number Tampa Bay		Affected Waterbody (Class) Class III		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 Area currently is freshwater marsh that connects a historic stream channel that flows from the east through Brooker Creek Preserve and eventually west towards Tarpon Lake and Gulf of Mexico					
Assessment area description The existing wetland contains a monoculture of cattails and is higher in elevation than the original stream footprint. The area does allow for some east to west flow, but does not efficiently convey water. The proposed mitigation will lower the existing elevation and introduce additional freshwater marsh species.					
Significant nearby features Historic stream channel that flows into surrounding wetlands and eventually west into Gulf of Mexico			Uniqueness (considering the relative rarity in relation to the regional None		
Functions Water detention and conveyance, 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 Wading birds, reptiles and amphibians			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Turkey, White-tailed Deer, Raccoon, wild pig, diamond-back rattle snake, red corn snake, wood duck, great blue heron, ibis, snowy egret, red-tailed hawk, rabbit					
Additional relevant factors:					
Assessment conducted by: Michael Stowe and Ryan Taylor-ESI			Assessment date(s): 03/23/11		

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

MITIGATION

Site/Project Name Brooker Creek Preserve	Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)	Assessment Area Name or Number Brooker South LWC
Impact or Mitigation Mitigation	Assessment conducted by: Michael Stowe and Ryan Taylor - ESI	Assessment date: 03/23/11

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 v/o pres or current with <div>7</div> <div>7</div>	The area acts as storage and conveyance for waters from the surrounding wetlands and supports wildlife as well.
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) <div>W</div> v/o pres or current with <div>3</div> <div>6</div>	The majority of the proposed LWC area is currently not a wetland, so with the installation of the proposed LWC, hydrology will be re-established within the area and it will offer better habitat diversity and additional nesting and foraging habitat
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community v/o pres or current with <div>7</div> <div>8</div>	The introduction of additional water flow will allow for the better establishment of benthic and other wetland-dependent species. It will also result in establishment of additional aquatic species.

Score = sum of above scores/30 (if uplands/20) current or w/o pres with <div>0.5667</div> <div>0.7000</div>

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	
Adjusted mitigation delta =	
*use 1.0 for creation	

For impact assessment areas FL = delta x acres =

Delta = [with-current] <div>0.13333333</div>

If mitigation (creation or enhancement)			
Time Lag	Years < or = 1	t-factor =	<div>1</div>
*Risk factor = (1 to 3, 0.25 increments)			<div>1.5</div>
*use 1.0 for preservation			

For mitigation assessment areas RFG = delta/(t-factor x risk) =	
<div>0.0889</div>	

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

Site/Project Name Brooker Creek Preserve		Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)		Assessment Area Name or Number Wetlands Adjacent to Brooker South LWC	
FLUCFCs code 411/615/621/630		Further classification (optional)		Impact or Mitigation Site? MITIGATION	Assessment Area Size (Acres) 99.6
Basin/Watershed Name/Number Tampa Bay		Affected Waterbody (Class) Class III		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 adjacent to proposed Brooker South LWC, part of historic stream channel that flows west into Gulf of Mexico					
Assessment area description Areas are forested wetlands adjacent to proposed Brooker South LWC, currently support some wildlife and wetland-dependent species.					
Significant nearby features Historic stream channel that flows into surrounding wetlands and eventually west into Gulf of Mexico			Uniqueness (considering the relative rarity in relation to the regional None		
Functions Water detention and conveyance, 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 Wading birds, reptiles and amphibians			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Turkey, White-tailed Deer, Raccoon, wild pig, diamond-back rattle snake, red corn snake, wood duck, great blue heron, ibis, snowy egret, red-tailed hawk, rabbit					
Additional relevant factors:					
Assessment conducted by: Michael Stowe and Ryan Taylor-ESI			Assessment date(s): 03/23/11		

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

MITIGATION

Site/Project Name Brooker Creek Preserve	Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)	Assessment Area Name or Number Wetlands Adjacent to Brooker North LWC
Impact or Mitigation Mitigation	Assessment conducted by: Michael Stowe and Ryan Taylor - ESI	Assessment date: 03/23/11

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 with <div>7</div> <div>8</div>	The wetlands currently support some wildlife habitat for surrounding areas, also act as storage and conveyance for water in historic stream channel. The proposed mitigation will result in additional conveyance and storage as well increase habitat diversity.
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) <div>W</div> w/o pres or current with <div>6</div> <div>8</div>	The installation of the proposed LWC will result in better water flow through these wetlands. Additionally, the LWC will be a lower elevation and will help prevent staging up of water within the upstream wetlands.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with <div>7</div> <div>8</div>	The introduction of additional water flow will allow for the better establishment of benthic and other wetland-dependent species. It will also result in establishment of additional aquatic species.

Score = sum of above scores/30 (if uplands/20) current or w/o pres with <div>0.6667</div> <div>0.8000</div>

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	
Adjusted mitigation delta =	
*use 1.0 for creation	

For impact assessment areas
FL = delta x acres =

Delta = [with-current] <div>0.13333333</div>

If mitigation (creation or enhancement)			
Time Lag	Years < or = 1	t-factor =	<div>1</div>
*Risk factor = (1 to 3, 0.25 increments)			<div>1.25</div>
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	<div>0.1067</div>

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

Site/Project Name Five Mile Creek		Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)		Assessment Area Name or Number Upland Enhancement	
FLUCFCs code 320 (existing)		Further classification (optional)		Impact or Mitigation Site? MITIGATION	Assessment Area Size (Acres) 0.7
Basin/Watershed Name/Number Upper Coastal		Affected Water body (Class) Class III		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 Upland berm located next to proposed open water wetland preservation, Five Mile Creek drains into Pithlachascotee River and ultimately into Gulf of Mexico					
Assessment area description Berm currently exists around borrow pond, mainly low quality vegetation such as wax myrtle and various other shrubs/grasses, also includes invasive species cogon grass. Berm will be excavated (2 ft.) to remove cogon grass and then planted with typical upland mesic hammock species such as beautyberry and saw palmetto					
Significant nearby features Connor Preserve and Starkey Wilderness Preserve, both SWFWMD preservation sites			Uniqueness (considering the relative rarity in relation to the regional) None		
Functions Will provide nesting, foraging and cover for wildlife, will help to offer habitat diversity after restoration			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) Deer, gopher tortoise, raccoon, armadillo, opossum, rabbits, turkey, rattle-snake, water moccasin			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the) Gopher Tortoise (T)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Armadillo, deer, gopher tortoise					
Additional relevant factors: 					
Assessment conducted by: John Bailey/Shirley Denton-Entrix; Ryan Taylor/Michael Stowe - ESI			Assessment date(s): 1/29/2010 - Entrix; 3/22/2011 - ESI		

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

MITIGATION

Site/Project Name Five Mile Creek	Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)	Assessment Area Name or Number Upland Enhancement
Impact or Mitigation Mitigation	Assessment conducted by: Shirley Denton/John Bailey-Entrix; Ryan Taylor/Michael Stowe-ESI	Assessment date: 1/29/2010 - Entrix; 3/22/2011 - ESI

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

<p>.500(6)(a) Location and Landscape Support</p> <p>w/o pres or current with</p> <p>4 7</p>	<p>The upland portion of the site is currently disturbed from a history of mining and borrow pit operations. The existing vegetation consist of a mixed assemblage of wax myrtle, salt bush, blackberry, cogon grass and several other weedy species. This is very low habitat and offers little in the way of foraging, nesting or cover for movement.</p>
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>Upland (U) or Wetland (W) U</p> <p>w/o pres or current with</p> <p>0 0</p>	
<p>.500(6)(c)Community structure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current with</p> <p>3 7</p>	
<p>The site is currently overgrown with cogon grass and other low quality species. By removing the cogon grass and planting native species, the area will better serve as foraging and nesting grounds</p>	

Score = sum of above scores/30 (if uplands/20)	
current	with
0.3500	0.7000

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	
Adjusted mitigation delta =	
*use 1.0 for creation	

For impact assessment areas	
FL = delta x acres =	

Delta = [with-current]
0.35

If mitigation (creation or enhancement)			
Time Lag	Years	t-factor =	1.25
	6 – 10		
*Risk factor = (1 to 3, 0.25 increments)			1.5
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.1867

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

Site/Project Name Five Mile Creek		Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)		Assessment Area Name or Number Wetland Floodplain Enhancement	
FLUCFCs code 320/631		Further classification (optional)		Impact or Mitigation Site? MITIGATION	Assessment Area Size (Acres) 6
Basin/Watershed Name/Number Upper Coastal		Affected Water body (Class) Class III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Area consists of existing upland and floodplain wetland associated with Five Mile Creek, floodplain drains into Five Mile Creek, which then flows into the Pithlachascotee River and ultimately into Gulf of Mexico</p> <p>Assessment area description</p> <p>Area highly disturbed as result of mining and borrow pit operations. Consists of scattered hardwood trees, but is mostly low quality, monoculture of Peruvian primrose-willow. Mitigation will consist of excavating existing vegetation and 1-2 feet of earth and replanting with diversity of native, aquatic wetland species.</p>					
Significant nearby features Connor Preserve and Starkey Wilderness Preserve, both SWFWMD preservation sites				Uniqueness (considering the relative rarity in relation to the regional None	
Functions Will provide aquatic nesting and foraging habitat, wading bird habitat, increase benthic organism diversity and additional improvement of water quality				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 Great Blue Heron, Snowy Egret, Wood Stork, raccoon, various reptile and amphibian species				Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the Wood Stork	
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):					
<p>Additional relevant factors:</p> <p>This portion of the project will coincide with another proposed, similar project involving the restoration of Five Mile Creek being performed by another entity.</p>					
Assessment conducted by: John Bailey/Shirley Denton-Entrix; Ryan Taylor/Michael Stowe - ESI				Assessment date(s): 1/29/2010 - Entrix; 3/22/2011 - ESI	

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

MITIGATION

Site/Project Name Five Mile Creek	Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)	Assessment Area Name or Number Wetland Floodplain Enhancement
Impact or Mitigation Mitigation	Assessment conducted by: Shirley Denton/John Bailey-Entrix; Ryan Taylor/Michael Stowe-ESI	Assessment date: 1/29/2010 - Entrix; 3/22/2011 - ESI

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

<p>.500(6)(a) Location and Landscape Support</p> <p>w/o pres or current with</p> <p>4 7</p>	<p>Site is highly disturbed as a result of historic mining and borrow pit operations and now consists of monoculture of primrose willow. Under current conditions, offers little diversity and restricts wildlife movement. Proposed mitigation would allow for better diversity and increase available food sources, as well as result in one large contiguous wetland adjoin Five Mile Creek.</p>
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>Upland (U) or Wetland (W) W</p> <p>w/o pres or current with</p> <p>6 8</p>	<p>Site currently provides little aquatic habitat and restricts surface flow of water. In addition, water quality and aquatic wildlife usage very low. Proposed mitigation will improve water quality within the area, provide for additional attenuation and improve fish and aquatic nesting habitat.</p>
<p>.500(6)(c)Community structure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current with</p> <p>3 7</p>	<p>Site currently contains low quality monoculture of primrose willow throughout, area is poorly managed and offers little in way of nesting or foraging ground. The proposed mitigation will increase wading bird habitat and ultimately provide for better benthic macro/micro invertebrates, reptiles and amphibians.</p>

Score = sum of above scores/30 (if uplands/20)
current with
0.4333 0.7333

If preservation as mitigation,
*Preservation adjustment factor = (0 to 1, 1/10th increments)
Adjusted mitigation delta =
*use 1.0 for creation

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
0.3

If mitigation (creation or enhancement)
Time Lag Years t-factor =
5 1.14
*Risk factor = (1 to 3, 0.25 increments)
1.5
*use 1.0 for preservation

For mitigation assessment areas
RFG = delta/(t-factor x risk) =
0.1754

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

Site/Project Name Five Mile Creek		Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)		Assessment Area Name or Number Wetland Floodplain Restoration	
FLUCFCs code 320		Further classification (optional)		Impact or Mitigation Site? MITIGATION	
				Assessment Area Size (Acres) 3.4	
Basin/Watershed Name/Number Upper Coastal		Affected Water body (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Area consists of existing upland areas that were historically wetlands associated with Five Mile Creek, area serves as buffer between Five Mile Creek and existing borrow pits, area drains into Five Mile Creek, which then flows into the Pithlachascotee River and ultimately into Gulf of Mexico</p>					
<p>Assessment area description</p> <p>Area is highly disturbed as a result of historic mining and borrow pit operations. Site is dominated by a mix of low quality shrubs and grasses including salt bush and wax myrtle.</p>					
Significant nearby features Connor Preserve and Starkey Wilderness Preserve, both SWFWMD preservation sites				Uniqueness (considering the relative rarity in relation to the regional None	
Functions Currently provides little habitat and is dominated by low quality vegetation. Proposed mitigation will help restore diversity to the habitat and help create a large, contiguous floodplain area that will increase water storage and wading bird 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 Great Blue Heron, Snowy Egret, Wood Stork, raccoon, various reptile and amphibian species				Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the Wood Stork	
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: John Bailey/Shirley Denton-Entrix; Ryan Taylor/Michael Stowe - ESI				Assessment date(s): 1/29/2010 - Entrix; 3/22/2011 - ESI	

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

MITIGATION

Site/Project Name Five Mile Creek	Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)	Assessment Area Name or Number Wetland Floodplain Restoration
Impact or Mitigation Mitigation	Assessment conducted by: John Bailey/Shirley Denton-Entrix; Ryan Taylor/Michael Stowe - ESI	Assessment date: 1/29/2010 - Entrix; 3/22/2011 - ESI

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

<p>.500(6)(a) Location and Landscape Support</p> <p>w/o pres or current with</p> <p>0 7</p>	<p>Area currently offers no value to on-site wetlands or surrounding habitat. Portions of the proposed restoration areas are isolated and scattered throughout the site and currently exist as disjointed habitat fragments. The proposed mitigation will help to incorporate these scattered areas into one large contiguous floodplain that will better support wetland dependent species within the Five Mile Creek and surrounding wetland habitats.</p>
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>Upland (U) or Wetland (W) W</p> <p>w/o pres or current with</p> <p>0 8</p>	<p>Areas are currently classified as uplands. The grading activities will re-introduce hydrology to these areas and the planting will help to establish a diverse wetland that will help with water attenuation, water quality and habitat diversity.</p>
<p>.500(6)(c)Community structure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current with</p> <p>0 7</p>	<p>The habitat currently offers little support of wetland-dependent species. The proposed grading and planting will help to establish a viable benthic macro/micro-invertebrate community, as well as create a freshwater marsh habitat that will increase nursery and foraging habitat for wading birds.</p>

Score = sum of above scores/30 (if uplands/20)
current with
0.0000 0.7333

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	
Adjusted mitigation delta =	
*use 1.0 for creation	

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
0.73333333

If mitigation (creation or enhancement)			
Time Lag	Years	t-factor =	1.14
	5		
*Risk factor = (1 to 3, 0.25 increments)			1.5
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.4288

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

Site/Project Name Five Mile Creek		Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)		Assessment Area Name or Number Peninsula Wetland Enhancement	
FLUCFCs code 631		Further classification (optional)		Impact or Mitigation Site? MITIGATION	Assessment Area Size (Acres) 0.7
Basin/Watershed Name/Number Upper Coastal		Affected Waterbody (Class) Class III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Area consists of existing wetland associated with the borrow pit south of Five Mile Creek, is currently a depression in middle of existing peninsula that is to be restored, borrow pit overflows into Five Mile Creek during periods of high inundation, which then flows into the Pithlachascotee River and ultimately into Gulf of Mexico</p> <p>Assessment area description</p> <p>Area is low quality wetland dominated by thick canopy of salt bush, wax myrtle and Peruvian primrose willow. Wetland offers little value in way of foraging and nesting grounds, restricts wildlife movement and restricts sheet flow to adjacent wetland area.</p>					
Significant nearby features Connor Preserve and Starkey Wilderness Preserve, both SWFWMD preservation sites				Uniqueness (considering the relative rarity in relation to the regional None	
Functions Enhancement will allow for better habitat diversity, will increase wading bird nesting and foraging habitat and will increase water storage and duration of inundation.				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 Great Blue Heron, Snowy Egret, Wood Stork, raccoon, various reptile and amphibian species				Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the Wood Stork	
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: John Bailey/Shirley Denton-Entrix; Ryan Taylor/Michael Stowe - ESI				Assessment date(s): 1/29/2010 - Entrix; 3/22/2011 - ESI	

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

MITIGATION

Site/Project Name Five Mile Creek	Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)	Assessment Area Name or Number Peninsula Wetland Enhancement
Impact or Mitigation Mitigation	Assessment conducted by: John Bailey/Shirley Denton-Entrix; Ryan Taylor/Michael Stowe - ESI	Assessment date: 1/29/2010 - Entrix; 3/22/2011 - ESI

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	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 <div>4</div> with <div>7</div>	Improvements to existing habitat will result in increased diversity for this wetland and surrounding wetland habitat. Will allow for better overall habitat by creating one large contiguous floodplain.
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) <div>W</div> w/o pres or current <div>6</div> with <div>8</div>	The natural hydrology of this area has been significantly altered by the borrow pits. The proposed mitigation will help to increase the habitat diversity and grading activities will result in improved hydrology and water storage capacity.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current <div>3</div> with <div>7</div>	Area is currently dominated by monoculture of Peruvian primrose-willow and salt bush. The proposed planting will help increase plant and wildlife diversity and will increase wading bird habitat.

Score = sum of above scores/30 (if uplands/20)	
current or w/o pres	with
0.4333	0.7333

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	
Adjusted mitigation delta =	
*use 1.0 for creation	

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
0.3

If mitigation (creation or enhancement)			
Time Lag	Years 5	t-factor =	1.14
*Risk factor = (1 to 3, 0.25 increments)			1.5
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.1754

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

Site/Project Name Five Mile Creek		Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)		Assessment Area Name or Number Peninsula Wetland Restoration	
FLUCFCs code 320		Further classification (optional)		Impact or Mitigation Site? MITIGATION	Assessment Area Size (Acres) 4.4
Basin/Watershed Name/Number Upper Coastal		Affected Waterbody (Class) Class III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Area consists of existing upland peninsula associated with the borrow pit south of Five Mile Creek, is currently a peninsula in middle of existing borrow pit that is to be restored, borrow pit overflows into Five Mile Creek during periods of high inundation, which then flows into the Pithlachascotee River and ultimately into Gulf of Mexico</p> <p>Assessment area description</p> <p>Area is low quality upland dominated by thick canopy of mixed pines and salt bush wax myrtle and significant coverage of cogon grass. Area offers little value in way of foraging and nesting grounds, restricts wildlife movement and restricts sheet flow to adjacent wetland area.</p>					
Significant nearby features Connor Preserve and Starkey Wilderness Preserve, both SWFWMD preservation sites				Uniqueness (considering the relative rarity in relation to the regional None	
Functions Restoration will allow for better habitat diversity, will increase wading bird nesting and foraging habitat and will increase water storage capacity				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 Great Blue Heron, Snowy Egret, Wood Stork, raccoon, various reptile and amphibian species				Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the Wood Stork	
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: John Bailey/Shirley Denton-Entrix; Ryan Taylor/Michael Stowe - ESI				Assessment date(s): 1/29/2010 - Entrix; 3/22/2011 - ESI	

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

MITIGATION

Site/Project Name Five Mile Creek	Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)	Assessment Area Name or Number Peninsula Wetland Restoration
Impact or Mitigation Mitigation	Assessment conducted by: John Bailey/Shirley Denton-Entrix; Ryan Taylor/Michael Stowe - ESI	Assessment date: 1/29/2010 - Entrix; 3/22/2011 - ESI

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	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 0 with 7	Area currently exists as poorly managed upland area consisting primarily of a mixture of wax mayrtle, salt bush and cogon grass. The proposed mitigation will lower the existing elevation and re-introduce hydrology to the area. It will then be planted with freshwater marsh species and will help provide foraging and nesting habitat for this area and the surrounding wetlands.
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) W w/o pres or current 0 with 8	Area currently exists as an upland and does not support any aquatic vegetation of wetland-dependent species. The proposed mitigation will establish a freshwater marsh wetland capable of supporting numerous wetland-dependent species.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 0 with 7	The area is being restored back to a functioning wetland which will support a benthic community. This will help to establish a food chain within the area and will provide much better diversity and wildlife usage than the current condition.

Score = sum of above scores/30 (if uplands/20)	
current or w/o pres	with
0.0000	0.7333

If preservation as mitigation,
*Preservation adjustment factor = (0 to 1, 1/10th increments)
Adjusted mitigation delta =
*use 1.0 for creation

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
0.73333333

If mitigation (creation or enhancement)			
Time Lag	Years	t-factor =	1.14
	5		
*Risk factor = (1 to 3, 0.25 increments)			1.5
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.4288

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

Site/Project Name Five Mile Creek		Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)		Assessment Area Name or Number Littoral Shelf Creation	
FLUCFCs code 520		Further classification (optional)		Impact or Mitigation Site? MITIGATION	Assessment Area Size (Acres) 1.4
Basin/Watershed Name/Number Upper Coastal		Affected Waterbody (Class) Class III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Area is currently open water associated with the existing borrow pit, borrow pit overflows into Five Mile Creek during periods of high inundation, which then flows into the Pithlachascotee River and ultimately into Gulf of Mexico</p>					
<p>Assessment area description</p> <p>Area is currently open water and is part of the existing borrow pit. It contains some shallow emergent aquatic vegetation and provides little habitat.</p>					
Significant nearby features Connor Preserve and Starkey Wilderness Preserve, both SWFWMD preservation sites			Uniqueness (considering the relative rarity in relation to the regional) None		
Functions Area is proposed for creation of littoral shelf. Area will be filled to within 1-2' of feet of surface and planted with freshwater marsh species. This will help create habitat diversity and wading bird 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 Great Blue Heron, Snowy Egret, Wood Stork, raccoon, various reptile and amphibian species			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the Wood Stork		
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: John Bailey/Shirley Denton-Entrix; Ryan Taylor/Michael Stowe - ESI			Assessment date(s): 1/29/2010 - Entrix; 3/22/2011 - ESI		

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

MITIGATION

Site/Project Name Five Mile Creek	Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)	Assessment Area Name or Number Littoral Shelf Creation
Impact or Mitigation Mitigation	Assessment conducted by: John Bailey/Shirley Denton-Entrix; Ryan Taylor/Michael Stowe - ESI	Assessment date: 1/29/2010 - Entrix; 3/22/2011 - ESI

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 <div>4</div> with <div>7</div>	Area offers little support of surrounding wetlands, as it is primarily deep open water. Proposed mitigation will raise elevation to within 1-2" of surface and provide ideal freshwater marsh habitat that will provide nesting, foraging and cover habitat for wading birds and other wetland-dependent species.
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) <div>W</div> w/o pres or current <div>2</div> with <div>8</div>	Area has little value to aquatic plants and species as it is very deep from the borrow pit operations. Due to the deep elevation, emergent and ephemeral plants are scarce and the area currently does not support any nesting or fish habitat. Proposed mitigation will allow for support of aquatic species, as well as other reptiles and amphibians.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current <div>2</div> with <div>7</div>	Due to the depth, there is little habitat to support benthic species. Proposed mitigation will result in the creation of benthic habitat which will help to establish a viable food chain and attract other wetland-dependent species.

Score = sum of above scores/30 (if uplands/20) current or w/o pres with
<div>0.2667</div> <div>0.7333</div>

If preservation as mitigation, *Preservation adjustment factor = (0 to 1, 1/10th increments) Adjusted mitigation delta = *use 1.0 for creation
<div></div> <div></div>

For impact assessment areas FL = delta x acres =
<div></div>

Delta = [with-current] <div>0.46666667</div>

If mitigation (creation or enhancement) Time Lag Years 5 t-factor = *Risk factor = (1 to 3, 0.25 increments) *use 1.0 for preservation
<div>1.14</div> <div>1.5</div>

For mitigation assessment areas RFG = delta/(t-factor x risk) =
<div>0.2729</div>

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

Site/Project Name Five Mile Creek		Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)		Assessment Area Name or Number Lake Preservation	
FLUCFCs code 520		Further classification (optional)		Impact or Mitigation Site? MITIGATION	Assessment Area Size (Acres) 10.3
Basin/Watershed Name/Number Upper Coastal		Affected Waterbody (Class) Class III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Area is currently an open water borrow pit which overflows into Five Mile Creek during periods of high inundation, which then flows into the Pithlachascotee River and ultimately into Gulf of Mexico</p>					
<p>Assessment area description</p> <p>Area is currently open water and is a deep borrow pit. It contains some shallow emergent aquatic vegetation along the edges but otherwise provides little valuable habitat.</p>					
Significant nearby features Connor Preserve and Starkey Wilderness Preserve, both SWFWMD preservation sites				Uniqueness (considering the relative rarity in relation to the regional None	
Functions Area is proposed to be preserved. The borrow pit will benefit from the proposed improvements to the wetland around it and will provide future fish habitat which will benefit the increased presence of wildlife as result from the proposed mitigation.				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 Great Blue Heron, Snowy Egret, Wood Stork, American alligator, water moccasin, large mouth bass				Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the Wood Stork	
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: John Bailey/Shirley Denton-Entrix; Ryan Taylor/Michael Stowe - ESI				Assessment date(s): 1/29/2010 - Entrix; 3/22/2011 - ESI	

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

MITIGATION

Site/Project Name Five Mile Creek	Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)	Assessment Area Name or Number Lake Preservation
Impact or Mitigation Mitigation	Assessment conducted by: John Bailey/Shirley Denton-Entrix; Ryan Taylor/Michael Stowe - ESI	Assessment date: 1/29/2010 - Entrix; 3/22/2011 - ESI

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 with <div>4</div> <div>7</div>	Area offers little support of surrounding wetlands, as it is primarily deep open water. Proposed mitigation will raise elevation to within 1-2" of surface and provide ideal freshwater marsh habitat that will provide nesting, foraging and cover habitat for wading birds and other wetland-dependent species.
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) <div>W</div> w/o pres or current with <div>7</div> <div>8</div>	Area has little value to aquatic plants and species as it is very deep from the borrow pit operations. Due to the deep elevation, emergent and ephemeral plants are scarce and the area currently does not support any nesting or fish habitat. Proposed mitigation will allow for support of aquatic species, as well as other reptiles and amphibians.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with <div>3</div> <div>3</div>	Due to the depth, there is little habitat to support benthic species. Proposed mitigation will result in the creation of benthic habitat which will help to establish a viable food chain and attract other wetland-dependent species.

Score = sum of above scores/30 (if uplands/20) current or w/o pres with <div>0.4667</div> <div>0.6000</div>
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If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	
Adjusted mitigation delta =	
*use 1.0 for creation	

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
0.13333333

If mitigation (creation or enhancement)			
Time Lag	Years	t-factor =	1
	< or = 1		
*Risk factor = (1 to 3, 0.25 increments)			1.5
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.0533

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

Site/Project Name Five Mile Creek		Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)		Assessment Area Name or Number Cypress Island Restoration	
FLUCFCs code 320		Further classification (optional)		Impact or Mitigation Site? MITIGATION	Assessment Area Size (Acres) 0.5
Basin/Watershed Name/Number Upper Coastal		Affected Waterbody (Class) Class III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Area is currently part of the peninsula that extends into the existing borrow pit, borrow pit overflows into Five Mile Creek during periods of high inundation, which ultimately flows in Pithlachascotee River and ultimately into Gulf of Mexico</p>					
<p>Assessment area description</p> <p>Area is currently part of the peninsula that extends into the existing borrow pit and consists of an ill-defined mixture of salt bush, wax myrtle and cogon grass.</p>					
Significant nearby features Connor Preserve and Starkey Wilderness Preserve, both SWFWMD preservation sites			Uniqueness (considering the relative rarity in relation to the regional None		
Functions Area is proposed for creation of cypress island within the littoral shelf. Area will be filled to within 1" of surface and planted with bald and pond cypress trees. This will help create habitat diversity and roosting 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 Great Blue Heron, Snowy Egret, Wood Stork, raccoon, various reptile and amphibian species			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the Wood Stork		
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: John Bailey/Shirley Denton-Entrix; Ryan Taylor/Michael Stowe - ESI			Assessment date(s): 1/29/2010 - Entrix; 3/22/2011 - ESI		

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

MITIGATION

Site/Project Name Five Mile Creek	Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)	Assessment Area Name or Number Cypress Island Restoration
Impact or Mitigation Mitigation	Assessment conducted by: John Bailey/Shirley Denton-Entrix; Ryan Taylor/Michael Stowe - ESI	Assessment date: 1/29/2010 - Entrix; 3/22/2011 - ESI

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 with 0 7	Area offers little support of surrounding wetlands, as it is currently poorly managed uplands. Proposed mitigation will raise elevation to within 1" of surface and provide ideal forested habitat within the newly restored peninsula that will provide nesting, foraging and cover habitat for wading birds and other wetland-dependent species.
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) W w/o pres or current with 0 8	Area has little value to aquatic plants and species as it is currently uplands. Proposed mitigation will provide additional habitat diversity by introducing a forested element within the surrounding freshwater marsh.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 0 7	The proposed mitigation will increase habitat diversity and attract additional species to the freshwater marsh area. The forested portion will provide additional cover for wildlife and will create a food source and nesting habitat for birds.

Score = sum of above scores/30 (if uplands/20) current or w/o pres with 0.0000 0.7333

If preservation as mitigation, *Preservation adjustment factor = (0 to 1, 1/10th increments)	
Adjusted mitigation delta =	
*use 1.0 for creation	

For impact assessment areas FL = delta x acres =

Delta = [with-current] 0.73333333
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If mitigation (creation or enhancement)			
Time Lag	Years 6 – 10	t-factor =	1.25
*Risk factor = (1 to 3, 0.25 increments)			1.5
*use 1.0 for preservation			

For mitigation assessment areas RFG = delta/(t-factor x risk) =	
	0.3911

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

Site/Project Name Goethe State Forest		Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)		Assessment Area Name or Number Direct Hydrologic Enhancement	
FLUCFCs code 615, 617, 625		Further classification (optional)		Impact or Mitigation Site? MITIGATION	
				Assessment Area Size (Acres) 275	
Basin/Watershed Name/Number Waccasassa		Affected Waterbody (Class) Class III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Vast interconnected wetland system flowing north into the North Prong of Tenmile Creek. Goethe State Forest (GSF) abuts the LNP site and is currently managed by the Department of Forestry. The Daniels Island Tract is managed for timber, recreation, water resource protection, and other passive uses. Most of the wetland areas are surrounded by pine plantation and/or pine flatwoods; this system is ditched.</p>					
<p>Assessment area description</p> <p>Moderate quality, ditched wetland forest. This wetland community is characterized primarily by pond cypress and swamp tupelo intermixed with slash pine, red maple, dahoon holly, swamp bay, sweetbay, loblolly bay, laurel oak, sweetgum and water oak. Virginia willow, titi, swamp dogwood, doghobble, myrtle dahoon, fetterbush, wax myrtle and buttonbush also occur throughout the understory. Herbaceous cover consists of maidencane, Virginia chain fern, arrowhead, lizards tail, false nettle, beaksedges, bladderworts and royal fern. All but the deepest portions of this system contain pine encroachment. Site is managed by the Department of Forestry.</p>					
Significant nearby features Goethe State Park, Gulf Hammock Conservation Area, Waccasassa bay Preserve, and Cross Florida Greenway.				Uniqueness (considering the relative rarity in relation to the regional None	
Functions Will provide nesting, foraging and cover for wildlife, while improving water quality.				Mitigation for previous permit/other historic use None	
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to Deer, racoon, armadillo, opossum, rabbits, turkey, rattle-snake, water moccasin				Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the None	
<p>Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):</p> <p align="center">Armadillo, deer, water moccasin</p>					
Additional relevant factors:					
Assessment conducted by: VAF/DDS-Entrix & Jon Barmore/David Dickson - ESI				Assessment date(s): November 2009 and March 2011	

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

MITIGATION

Site/Project Name Goethe State Forest	Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)	Assessment Area Name or Number Direct Hydrologic Enhancement
Impact or Mitigation Mitigation	Assessment conducted by: VAF/DDS-Entrix & Jon Barmore/David Dickson - ESI	Assessment date: November 2009 and March 2011

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	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

<p>.500(6)(a) Location and Landscape Support</p> <p>w/o pres or current with</p> <p>8 8</p>	<p>The wetland portion of this site supports the surrounding upland and wetland communities as part of the greater Goethe State Park.</p>
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>Upland (U) or Wetland (W) W</p> <p>w/o pres or current with</p> <p>6 8</p>	
<p>.500(6)(c)Community structure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current with</p> <p>7 7</p>	

Score = sum of above scores/30 (if uplands/20)	
current	with
0.7000	0.7667

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	
Adjusted mitigation delta =	
*use 1.0 for creation	

For impact assessment areas	
FL = delta x acres =	

Delta = [with-current]
0.06666667

If mitigation (creation or enhancement)			
Time Lag	Years 6 – 10	t-factor =	1.14
*Risk factor = (1 to 3, 0.25 increments)			1.25
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.0468

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

Site/Project Name Goethe State Forest		Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)		Assessment Area Name or Number Indirect Hydrologic Enhancement	
FLUCFCs code 617, 625		Further classification (optional)		Impact or Mitigation Site? MITIGATION	
				Assessment Area Size (Acres) 2,085.40	
Basin/Watershed Name/Number Waccasassa		Affected Waterbody (Class) Class III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Vast interconnected wetland system flowing north into the North Prong of Tenmile Creek. Goethe State Forest (GSF) abuts the LNP site and is currently managed by the Department of Forestry. The Daniels Island Tract is managed for timber, recreation, water resource protection, and other passive uses. Most of the wetland areas are surrounded by pine plantation and/or pine flatwoods; this system is ditched.</p>					
<p>Assessment area description</p> <p>Moderate quality, ditched wetland forest. This wetland community is characterized primarily by pond cypress and swamp tupelo intermixed with slash pine, red maple, dahoon holly, swamp bay, sweetbay, loblolly bay, laurel oak, sweetgum and water oak. Virginia willow, titi, swamp dogwood, doghobble, myrtle dahoon, fetterbush, wax myrtle and buttonbush also occur throughout the understory. Herbaceous cover consists of maidencane, Virginia chain fern, arrowhead, lizards tail, false nettle, beaksedges, bladderworts and royal fern. All but the deepest portions of this system contain pine encroachment. Site is managed by the Department of Forestry.</p>					
Significant nearby features Goethe State Park, Gulf Hammock Conservation Area, Waccasassa bay Preserve, and Cross Florida Greenway.			Uniqueness (considering the relative rarity in relation to the regional None		
Functions Will provide nesting, foraging and cover for wildlife, while improving water quality.			Mitigation for previous permit/other historic use None		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to Deer, racoon, armadillo, opossum, rabbits, turkey, rattle-snake, water moccasin			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the None		
<p>Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):</p> <p align="center">Armadillo, deer, water moccasin</p>					
Additional relevant factors:					
Assessment conducted by: VAF/DDS-Entrix & Jon Barmore/David Dickson - ESI			Assessment date(s): November 2009 and March 2011		

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

MITIGATION

Site/Project Name Goethe State Forest	Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)	Assessment Area Name or Number Indirect Hydrologic Enhancement
Impact or Mitigation Mitigation	Assessment conducted by: VAF/DDS-Entrix & Jon Barmore/David Dickson - ESI	Assessment date: November 2009 and March 2011

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

<p>.500(6)(a) Location and Landscape Support</p> <p>w/o pres or current with</p> <p>8 8</p>	<p>The wetland portion of this site supports the surrounding upland and wetland communities as part of the greater Goethe State Park.</p>
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>Upland (U) or Wetland (W) W</p> <p>w/o pres or current with</p> <p>6 7</p>	<p>The hydrology in this area has been historically altered by roads, ditches, and canals. Removing some of these key impedences will allow for the recovery of historic sheetflow and water levels. These wetlands are not directly associated with the impedences, instead, they are adjacent or connecting to those wetlands that are directly affected.</p>
<p>.500(6)(c)Community structure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current with</p> <p>7 7</p>	<p>The wetland community is diverse and mature.</p>

Score = sum of above scores/30 (if uplands/20)
current with
0.7000 0.7333

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	
Adjusted mitigation delta =	
*use 1.0 for creation	

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
0.033333333

If mitigation (creation or enhancement)			
Time Lag	Years	t-factor =	1.14
	5		
*Risk factor = (1 to 3, 0.25 increments)			1.25
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.0234

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

Site/Project Name Goethe State Forest		Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)		Assessment Area Name or Number RCW Upland Mowing	
FLUCFCs code 411		Further classification (optional)		Impact or Mitigation Site? MITIGATION	
				Assessment Area Size (Acres) 233	
Basin/Watershed Name/Number Waccasassa		Affected Waterbody (Class) Class III		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 These pine flatwoods surround and protect on-site wetland systems. Further, they form an interconnected corridor with the greater Goethe State Forest.					
Assessment area description Mature longleaf pine trees that provide suitable nesting and foraging habitat for RCWs.					
Significant nearby features Goethe State Park, Gulf Hammock Conservation Area, Waccasassa bay Preserve, and Cross Florida Greenway.			Uniqueness (considering the relative rarity in relation to the regional None		
Functions Will provide nesting, foraging and cover for wildlife, while improving water quality.			Mitigation for previous permit/other historic use None		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to Deer, racoon, armadillo, opossum, rabbits, turkey, rattle-snake, water moccasin			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the Red-cockaded woodpecker		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): RCW, armadillo, deer					
Additional relevant factors:					
Assessment conducted by: Jon Barmore and David Dickson - ESI			Assessment date(s): March 2011		

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

MITIGATION

Site/Project Name Goethe State Forest	Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)	Assessment Area Name or Number RCW Upland Mowing
Impact or Mitigation Mitigation	Assessment conducted by: Jon Barmore and David Dickson - ESI	Assessment date: March 2011

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	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

<p>.500(6)(a) Location and Landscape Support</p> <p>w/o pres or current with</p> <p>6 7</p>	<p>The current landscape has a high degree of overgrown undergrowth that is not optimal for RCW foraging and nesting. A program of mowing around the bases of RCW pine trees will increase the usability of this habitat by surrounding populations of RCWs.</p>
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>Upland (U) or Wetland (W) U</p> <p>w/o pres or current with</p> <p>0 0</p>	<p>N/A</p>
<p>.500(6)(c)Community structure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current with</p> <p>7 7</p>	<p>No significant change will occur in the community structure that will affect nearby wetland functions and values.</p>

Score = sum of above scores/30 (if uplands/20)	
current	with
0.6500	0.7000

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	
Adjusted mitigation delta =	
*use 1.0 for creation	

For impact assessment areas	
FL = delta x acres =	

Delta = [with-current]
0.05

If mitigation (creation or enhancement)			
Time Lag	Years < or = 1	t-factor =	1
*Risk factor = (1 to 3, 0.25 increments)			1.25
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.0400

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

Site/Project Name Goethe State Forest		Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)		Assessment Area Name or Number Trail Road Restoration	
FLUCFCs code 814 to 630		Further classification (optional)		Impact or Mitigation Site? MITIGATION	
				Assessment Area Size (Acres) 3.6	
Basin/Watershed Name/Number Waccasassa		Affected Waterbody (Class) Class III		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 Currently, the railroad areas create an artificial barrier to natural water flow to the wetland system running throughout Goethe State Park.					
Assessment area description Currently, a non-vegetated railroad. Proposed, a wetland forest with similar species to surrounding (abutting) wetland areas.					
Significant nearby features Goethe State Park, Gulf Hammock Conservation Area, Waccasassa bay Preserve, and Cross Florida Greenway.			Uniqueness (considering the relative rarity in relation to the regional None		
Functions Will provide nesting, foraging and cover for wildlife, while improving water quality.			Mitigation for previous permit/other historic use None		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to Deer, racoon, armadillo, opossum, rabbits, turkey, rattle-snake, water moccasin			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the None		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Armadillo, deer, water moccasin					
Additional relevant factors:					
Assessment conducted by: Jon Barmore and David Dickson - ESI			Assessment date(s): March 2011		

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

MITIGATION

Site/Project Name Goethe State Forest	Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)	Assessment Area Name or Number Trail Road Restoration
Impact or Mitigation Mitigation	Assessment conducted by: Jon Barmore and David Dickson - ESI	Assessment date: March 2011

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	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

<p>.500(6)(a) Location and Landscape Support</p> <p>After removal of the railroad, this area will act as a corridor for the movement of wildlife and water resources.</p> <p>w/o pres or current with</p> <p>0 7</p>
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>Upland (U) or Wetland (W) W</p> <p>The focus of the rectoration effort will be to restore natural sheetflow and hydrolocig patterns to the adjaoining wetland systems.</p> <p>w/o pres or current with</p> <p>0 8</p>
<p>.500(6)(c)Community structure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>The community structure will go from a non-vegetated trail road, to a diverse forested wetland.</p> <p>w/o pres or current with</p> <p>0 7</p>

Score = sum of above scores/30 (if uplands/20)	
current	with
0.0000	0.7333

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	
Adjusted mitigation delta =	
*use 1.0 for creation	

For impact assessment areas	
FL = delta x acres =	

Delta = [with-current]
0.733333333

If mitigation (creation or enhancement)			
Time Lag	Years 26 – 30	t-factor =	2.18
*Risk factor = (1 to 3, 0.25 increments)			1.5
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.2243

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

Site/Project Name Homosassa Tract		Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)		Assessment Area Name or Number Activity Area 1, Wetland Hydrologic Enhancement	
FLUCFCs code 630		Further classification (optional)		Impact or Mitigation Site? MITIGATION	
				Assessment Area Size (Acres) 170.4	
Basin/Watershed Name/Number Upper Coastal		Affected Waterbody (Class) Class III		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 This area is part of a large wetland system that inter-connects throughout the entire Homosassa Tract.					
Assessment area description This mixed forested wetland community is of moderate quality and comprises the majority of the forested wetlands targeted for restoration/enhancement on the northern portion of the site. This community encompasses historic basin swamp limits as well as historic wet flatwoods that have evolved basin swamp characteristics due to fire exclusion. Additionally, the site is managed by Department of Forestry.					
Significant nearby features Adjacent to Chassahowitzka Riverine Swamp Sanctuary. Located in close proximity to Crystal River Preserve State Park, Crystal River Archaeological State Park, and Homosassa Springs Wildlife State park. Tract encompasses portions of Otter Creek and Mason Creek.			Uniqueness (considering the relative rarity in relation to the regional landscape) Not unique in the overall landscape in this area.		
Functions wildlife feeding and refuge, flood storage, ground water attenuation, water quality enhancement			Mitigation for previous permit/other historic use Siviculture and Agriculture		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to occur) wading birds, small/medium mammals, amphibians and reptiles			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the area) protected wading birds (SSC), foraging and refuse, moderate		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): grey squirrel, passerine birds					
Additional relevant factors: 					
Assessment conducted by: VAF/DDS - Entrix; Shannon Julien/Joe Brinson-ESI			Assessment date(s): 12/9/2009 Entrix; 3/23-24/11, 6/30/11 ESI		

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

MITIGATION

Site/Project Name Homosassa Tract	Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)	Assessment Area Name or Number Activity Area 1, Wetland Hydrologic Enhancement
Impact or Mitigation Mitigation	Assessment conducted by: VAF/DDS - Entrix; Shannon Julien/JoeBrinson-ESI	Assessment date: 12/9/2009 Entrix; 3/23-24/11, 6/30/11 ESI

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	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

<p>.500(6)(a) Location and Landscape Support</p> <p>w/o pres or current with</p> <p>7 7</p>	<p>Historic flows have been altered to the north due to development. The overall Location and Landscape Support will not change.</p>
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>Upland (U) or Wetland (W) W</p> <p>w/o pres or current with</p> <p>6 8</p>	<p>More than adequate habitat, restore hydroperiods, storage capacity and attenuation, increased water flow and water quality</p>
<p>.500(6)(c)Community structure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current with</p> <p>7 8</p>	<p>Improved habitats/bioiversity/vegetative retention as hydroperiods are restored.</p>

Score = sum of above scores/30 (if uplands/20)
current with
or w/o pres with
0.6667 0.7667

If preservation as mitigation,
*Preservation adjustment factor = (0 to 1, 1/10th increments)
Adjusted mitigation delta =
*use 1.0 for creation

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
0.1

If mitigation (creation or enhancement)
Time Lag Years t-factor =
3 1.07
*Risk factor = (1 to 3, 0.25 increments)
1
*use 1.0 for preservation

For mitigation assessment areas
RFG = delta/(t-factor x risk) =
0.0935

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

Site/Project Name Homosassa Tract		Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)		Assessment Area Name or Number Activity Area 1, Wet Prairie Restoration	
FLUCFCs code 643		Further classification (optional) Class III		Impact or Mitigation Site? MITIGATION	
				Assessment Area Size (Acres) 25	
Basin/Watershed Name/Number Upper Coastal		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 Adjacent to Mixed Forested Wetlands to be improved hydrologically with 3 low water crossings.					
Assessment area description This low to moderate quality shub dominated community occupies the northeast corner of Activity Area 1. Historically these lands were sparsely canopied, herbaceous wet flatwoods. Additionally, the site is managed by Department of Forestry. This area is currently classified as wetland scrub and is dominated by a monoculture of wax myrtle. Reduced hydroperiods have allowed scrub/shrub components to enter. Active management will be conducted to restore this habitat to wet prairie.					
Significant nearby features Adjacent to Chassahowitzka Riverine Swamp Sanctuary. Located in close proximity to Crystal River Preserve State Park, Crystal River Archaeological State Park, and Homosassa Springs Wildlife State park. Tract encompasses portions of Otter Creek and Mason Creek.				Uniqueness (considering the relative rarity in relation to the regional	
Functions Will provide nesting, foraging and cover for wildlife, while improving water quality.				Mitigation for previous permit/other historic use	
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to small and medium mammals, wading birds, reptiles and amphibians				Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the Wading birds (SSC) feeding and nesting, moderate	
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): None					
Additional relevant factors:					
Assessment conducted by: VAF/DDS - Entrix; Shannon Julien/Joe Brinson-ESI				Assessment date(s): 12/9/2009 Entrix; 3/23-24/11, 6/30/11 ESI	

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

MITIGATION

Site/Project Name Homosassa Tract	Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)	Assessment Area Name or Number Activity Area 1, Wet Prairie Restoration
Impact or Mitigation Mitigation	Assessment conducted by: VAF/DDS - Entrix; Shannon Julien/JoeBrinson-ESI	Assessment date: 12/9/2009 Entrix; 3/23-24/11, 6/30/11 ESI

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	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

<p>.500(6)(a) Location and Landscape Support</p> <p>w/o pres or current with</p> <p>7 8</p>	The wetland portion of this site supports the surrounding mixed forested wetland communities.
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>Upland (U) or Wetland (W) W</p> <p>w/o pres or current with</p> <p>6 7</p>	The hydrology in this area has been historically altered. Improved hydroperiods and increased mangement will allow for the recovery of historic sheetflow and water levels.
<p>.500(6)(c)Community structure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current with</p> <p>4 8</p>	This is currnetly a monoculture of wax myrtle that will be retored to historic conditions, with restored hydroperiods, increased vegetative diversity and wildlife divresity, will be actively managed.

Score = sum of above scores/30 (if uplands/20)	
current	with
0.5667	0.7667

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	
Adjusted mitigation delta =	
*use 1.0 for creation	

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
0.2

If mitigation (creation or enhancement)			
Time Lag	Years	t-factor =	1.14
	5		
*Risk factor = (1 to 3, 0.25 increments)			1.25
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.1404

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

Site/Project Name Homosassa Tract		Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)		Assessment Area Name or Number Activity Area 2, Wetland Hydrologic Enhancement	
FLUCFCs code 615		Further classification (optional)		Impact or Mitigation Site? MITIGATION	
				Assessment Area Size (Acres) 387.2	
Basin/Watershed Name/Number Upper Coastal		Affected Waterbody (Class) Class III		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 This is basin swamp that is interconnected to wetlands to the north within the Homosassa Tract and also is considered contiguous wetland to Mason and Otter Creek.					
Assessment area description This basin swamp is of moderate quality and is located in the southern western portion of the Homosassa Tract. Elevated trail roads once used for silviculture and agricultural activities have altered the hydrology to some extent.					
Significant nearby features Adjacent to Chassahowitzka Riverine Swamp Sanctuary. Located in close proximity to Crystal River Preserve State Park, Crystal River Archaeological State Park, and Homosassa Springs Wildlife State park. Tract encompasses portions of Otter Creek and Mason Creek.				Uniqueness (considering the relative rarity in relation to the regional Not unique in surrounding area.	
Functions wildlife feeding and refuge, flood storage, ground water attenuation, water quality enhancement				Mitigation for previous permit/other historic use Agriculture and Silviculture	
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to small and medium mammals, wading and passerine birds, reptiles and amphibians.				Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the wading birds (SSC) foraging and nesting, moderate	
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): deer tracks, raccoon tracks, wild turkey tracks					
Additional relevant factors: 					
Assessment conducted by: VAF/DDS - Entrix; Shannon Julien/JoeBrinson-ESI				Assessment date(s): 12/9/2009 Entrix; 3/23-24/11, 6/30/11 ESI	

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

MITIGATION

Site/Project Name Homosassa Tract	Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)	Assessment Area Name or Number Activity Area 2, Wetland Hydrologic Enhancement
Impact or Mitigation Mitigation	Assessment conducted by: VAF/DDS - Entrix; Shannon Julien/JoeBrinson-ESI	Assessment date: 12/9/2009 Entrix; 3/23-24/11, 6/30/11 ESI

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 <div>7</div> <div>7</div>	This area is largely undisturbed with the exception of old trail roads and undersized culverts. The location and landscape support will not be altered significantly.
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) <div>W</div> w/o pres or current with <div>6</div> <div>8</div>	
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with <div>7</div> <div>8</div>	

Score = sum of above scores/30 (if uplands/20)	
current	with
<div>0.6667</div>	<div>0.7667</div>

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	
Adjusted mitigation delta =	
*use 1.0 for creation	

For impact assessment areas	
FL = delta x acres =	

Delta = [with-current]
<div>0.1</div>

If mitigation (creation or enhancement)			
Time Lag	Years 3	t-factor =	<div>1.07</div>
*Risk factor = (1 to 3, 0.25 increments)			<div>1</div>
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	<div>0.0935</div>

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

Site/Project Name Levy Nuclear Plant Site		Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)		Assessment Area Name or Number Waccasassa (1,2,3,4); Withlacoochee (2,3) Wetland Preservation	
FLUCFCs code Multiple		Further classification (optional)		Impact or Mitigation Site? MITIGATION	
				Assessment Area Size (Acres) *see below	
Basin/Watershed Name/Number Waccasassa/Withlacoochee		Affected Waterbody (Class) Class III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) N/A	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Basin divide within the property splits the water flow between the Waccasassa and Withlacoochee basins. Water in the northern portion of the project area (Waccasassa) flows north into Goethe State Park. Water in the southern portion (Withlacoochee), flows south to the Withlacoochee River.</p>					
<p>Assessment area description</p> <p>This assessment area includes all onsite wetlands that are being preserved. Mixed wetland hardwoods, Cypress, Wetland forested mixed, Freshwater marsh, Wet prairie, and Hydric pine plantation.</p>					
<p>Significant nearby features</p> <p>Located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River.</p>				<p>Uniqueness (considering the relative rarity in relation to the regional</p> <p align="center">N/A</p>	
<p>Functions</p> <p>Functions include wildlife feeding and refuge and water quality and storage benefits, although limited by the surrounding silviculture practices</p>				<p>Mitigation for previous permit/other historic use</p> <p align="center">N/A</p>	
<p>Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to</p> <p>birds (passerine, raptor and wading bird species), small/medium mammals (hogs, etc.), amphibians and reptiles</p>				<p>Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the</p> <p align="center">wading birds (scc)</p>	
<p>Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):</p> <p align="center">Wading bird foraging, deer tracks and scat, raccoons, snakes, hog rooting</p>					
<p>Additional relevant factors:</p> <p><u>*Acreages per Activity Area (AA)</u> Waccasassa: AA 1 (109.7 ac), AA 2 (502.3 ac), AA 3 (9.9 ac), AA 4 (41.2 ac) Withlacoochee: AA 2 (30.2 ac), AA 3 (49.5 ac)</p>					
<p>Assessment conducted by:</p> <p>VAF/DDS-Entrix & Jon Barmore/David Dickson-ESI</p>				<p>Assessment date(s):</p> <p>Dec 2009 - Jan 2010 - Entrix & Mar 2011 - ESI</p>	

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

MITIGATION

Site/Project Name Levy Nuclear Plant Site	Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)	Assessment Area Name or Number Wetland Preservation
Impact or Mitigation Mitigation	Assessment conducted by: VAF/DDS-Entrix & Jon Barmore/David Dickson-ESI	Assessment date: Dec 2009 - Jan 2010 - Entrix & Mar 2011 - ESI

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 <div>7</div> with <div>7</div>	The area is surrounded by a diverse assemblage of upland and wetland communities. These will not be directly affected by the straight preservation of the wetlands.
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) <div>W</div> w/o pres or current <div>5</div> with <div>5</div>	No increase or decrease in water environment is anticipated as a result of the straight preservation of the wetland areas.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current <div>7</div> with <div>8</div>	The vegetative community of the preserved wetland areas will be allow to continue to mature and diversify once protected under a conservation easement.

Score = sum of above scores/30 (if uplands/20)	
current or w/o pres	with
0.6333	0.6667

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	0.6
Adjusted mitigation delta =	0.02
*use 1.0 for creation	

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
0.03333333

If mitigation (creation or enhancement)		
Time Lag	Years <select>	t-factor =
*Risk factor = (1 to 3, 0.25 increments)		
*use 1.0 for preservation		

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.0200

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

Site/Project Name Levy Nuclear Plant Site		Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)		Assessment Area Name or Number Waccasassa (1,2,3,4); Withlacoochee (2,3) Wetland Hydrologic Enhancement	
FLUCFCs code Multiple		Further classification (optional)		Impact or Mitigation Site? MITIGATION	
				Assessment Area Size (Acres) *see below	
Basin/Watershed Name/Number Waccasassa/Withlacoochee		Affected Waterbody (Class) Class III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) N/A	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Basin divide within the property splits the water flow between the Waccasassa and Withlacoochee basins. Water in the northern portion of the project area (Waccasassa) flows north into Goethe State Park. Water in the southern portion (Withlacoochee), flows south to the Withlacoochee River.</p>					
<p>Assessment area description This assessment area includes all onsite wetlands that are being hydrologically restored Mixed wetland hardwoods, Cypress, Wetland forested mixed, Freshwater marsh, Wet prairie, and Hydric pine plantation.</p>					
<p>Significant nearby features Located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River.</p>				<p>Uniqueness (considering the relative rarity in relation to the regional N/A</p>	
<p>Functions Functions include wildlife feeding and refuge and water quality and storage benefits, although limited by the surrounding silviculture practices</p>				<p>Mitigation for previous permit/other historic use N/A</p>	
<p>Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to birds (passerine, raptor and wading bird species), small/medium mammals (hogs, etc.), amphibians and reptiles</p>				<p>Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the wading birds (scc)</p>	
<p>Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Wading bird foraging, deer tracks and scat, raccoons, snakes, hog rooting</p>					
<p>Additional relevant factors: <u>*Acreages per Activity Area (AA)</u> Waccasassa: AA 1 (117.2 ac), AA 2 (779.9 ac), AA 3 (18.0 ac), AA 4 (73.1 ac) Withlacoochee: AA 2 (48.9 ac), AA 3 (70.8 ac)</p>					
<p>Assessment conducted by: VAF/DDS-Entrix & Jon Barmore/David Dickson-ESI</p>				<p>Assessment date(s): Dec 2009-Jan 2010 - Entrix & Mar 2011 - ESI</p>	

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

MITIGATION

Site/Project Name Levy Nuclear Plant Site	Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)	Assessment Area Name or Number Wetland Hydrologic Enhancement
Impact or Mitigation Mitigation	Assessment conducted by: VAF/DDS-Entrix & Jon Barmore/David Dickson-ESI	Assessment date: Dec 2009 - Jan 2010 - Entrix & Mar 2011 - ESI

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	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

<p>.500(6)(a) Location and Landscape Support</p> <p>w/o pres or current with</p> <p>7 7</p>	<p>The area is surrounded by a diverse assemblage of upland and wetland communities. These will not be directly affected by the hydrologic enhancement of the wetlands.</p>
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>Upland (U) or Wetland (W) W</p> <p>w/o pres or current with</p> <p>5 9</p>	<p>The water environment of these wetland areas is currently reduced due to on-site ditching and blocking (roads). The installation of low water crossings and ditch blocks will allows for natural hydrology and sheetflow between wetland systems.</p>
<p>.500(6)(c)Community structure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current with</p> <p>7 7</p>	<p>The vegetative community of the hydrologically enhanced wetland areas is not expected to change based soley on the enhancement activities.</p>

Score = sum of above scores/30 (if uplands/20)
current with
0.6333 0.7667

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	
Adjusted mitigation delta =	
*use 1.0 for creation	

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
0.13333333

If mitigation (creation or enhancement)			
Time Lag	Years <select>	t-factor =	1.14
*Risk factor = (1 to 3, 0.25 increments)			1.25
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.0936

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

Site/Project Name Levy Nuclear Plant Site		Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)		Assessment Area Name or Number Waccasassa (1,2) Wetland Pine Thinning	
FLUCFCs code Multiple		Further classification (optional)		Impact or Mitigation Site? MITIGATION	
				Assessment Area Size (Acres) *see below	
Basin/Watershed Name/Number Waccasassa		Affected Waterbody (Class) Class III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) N/A	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Water flows north into Goethe State Park.					
Assessment area description This assessment area includes all onsite wetlands that will have invasive pines removed.					
Significant nearby features Located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River.				Uniqueness (considering the relative rarity in relation to the regional N/A	
Functions Functions include wildlife feeding and refuge and water quality and storage benefits, although limited by the surrounding silviculture practices				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 birds (passerine, raptor and wading bird species), small/medium mammals (hogs, etc.), amphibians and reptiles				Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the wading birds (scc)	
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Wading bird foraging, deer tracks and scat, raccoons, snakes, hog rooting					
Additional relevant factors: *Acreages per Activity Area (AA) Waccasassa: AA 1 (0.1 ac), AA 2 (0.2 ac)					
Assessment conducted by: VAF/DDS-Entrix & Jon Barmore/David Dickson-ESI				Assessment date(s): Dec 2009-Jan 2010 - ESI & Mar 2011 - ESI	

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

MITIGATION

Site/Project Name Levy Nuclear Plant Site	Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)	Assessment Area Name or Number Wetland Pine Thinning
Impact or Mitigation Mitigation	Assessment conducted by: VAF/DDS-Entrix & Jon Barmore/David Dickson-ESI	Assessment date: Dec 2009 - Jan 2010 - Entrix & Mar 2011 - ESI

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	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

<p>.500(6)(a) Location and Landscape Support</p> <p>w/o pres or current with</p> <p>7 8</p>	<p>Once excess pine trees have been removed from areas in which they have encroached, these communities will better support water and wildlife function from adjacent communities.</p>
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>Upland (U) or Wetland (W) W</p> <p>w/o pres or current with</p> <p>5 5</p>	<p>No increase or decrease in water environment is anticipated as a result of the wetland pine thinning.</p>
<p>.500(6)(c)Community structure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current with</p> <p>6 9</p>	<p>The pines proposed for removal are the result of encroaching pines from silvicultural activities. Thus, their removal will restore the wetland communities to their proper vegetative diversity and distribution of species.</p>

Score = sum of above scores/30 (if uplands/20)
current with
0.6000 0.7333

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	
Adjusted mitigation delta =	
*use 1.0 for creation	

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
0.13333333

If mitigation (creation or enhancement)			
Time Lag	Years <select>	t-factor =	1.25
*Risk factor = (1 to 3, 0.25 increments)			1.25
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.0853

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

Site/Project Name Levy Nuclear Plant Site		Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)		Assessment Area Name or Number Waccasassa (1,2,3,4); Withlacoochee (2,3) Herbaceous Wetland Restoration	
FLUCFCs code Multiple		Further classification (optional)		Impact or Mitigation Site? MITIGATION	
				Assessment Area Size (Acres) *see below	
Basin/Watershed Name/Number Waccasassa/Withlacoochee		Affected Waterbody (Class) Class III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) N/A	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Basin divide within the property splits the water flow between the Waccasassa and Withlacoochee basins. Water in the northern portion of the project area (Waccasassa) flows north into Goethe State Park. Water in the southern portion (Withlacoochee), flows south to the Withlacoochee River.</p>					
<p>Assessment area description This assessment area includes all onsite wetlands that are being vegetatively retored. Mixed wetland hardwoods, Cypress, Wetland forested mixed, Freshwater marsh, Wet prairie, and Hydric pine plantation.</p>					
<p>Significant nearby features Located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River.</p>				<p>Uniqueness (considering the relative rarity in relation to the regional N/A</p>	
<p>Functions Functions include wildlife feeding and refuge and water quality and storage benefits, although limited by the surrounding silviculture practices</p>				<p>Mitigation for previous permit/other historic use N/A</p>	
<p>Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to birds (passerine, raptor and wading bird species), small/medium mammals (hogs, etc.), amphibians and reptiles</p>				<p>Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the wading birds (scc)</p>	
<p>Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Wading brid foraging, deer tracks and scat, raccoons, snakes, hog rooting</p>					
<p>Additional relevant factors: *Acreages per Activity Area (AA) Waccasassa: AA 1 (7.4 ac), AA 2 (228.5 ac), AA 3 (8.1 ac), AA 4 (31.9 ac) Withlacoochee: AA 2 (18.7 ac), AA 3 (21.3 ac)</p>					
<p>Assessment conducted by: VAF/DDS-Entrix & Jon Barmore/David Dickson-ESI</p>				<p>Assessment date(s): Dec 2009-Jan 2010 - Entrix & Mar 2011 - ESI</p>	

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

MITIGATION

Site/Project Name Levy Nuclear Plant Site	Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)	Assessment Area Name or Number Herbaceous Wetland Restoration
Impact or Mitigation Mitigation	Assessment conducted by: VAF/DDS-Entrix & Jon Barmore/David Dickson-ESI	Assessment date: Dec 2009 - Jan 2010 - Entrix & Mar 2011 - ESI

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	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 <div>6</div> with <div>7</div>	Several significant areas of hydric pine plantation will be restored to herbaceous wetland systems. Currently, these areas do support the surrounding reas, but not with the specific, non-forested communities that would have been present without silvicultural activities.
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) <div>W</div> w/o pres or current <div>5</div> with <div>5</div>	No increase or decrease in water environment is anticipated as a result of the herbaceous wetland restoration.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current <div>6</div> with <div>9</div>	Investigations have shown that the communities proposed for herbaceous restoration were likely either non-forested prior to silvicultural activities or represent a percentage of wetlands that should be herbaceous (based on surrounding land types). The removal of treesand planting of desirable species will allow these communities to better support habitat specific vegetation and wildlife.

Score = sum of above scores/30 (if uplands/20)	
current or w/o pres	with
0.5667	0.7000

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	
Adjusted mitigation delta =	
*use 1.0 for creation	

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
0.13333333

If mitigation (creation or enhancement)			
Time Lag	Years <select>	t-factor =	1.92
*Risk factor = (1 to 3, 0.25 increments)			1.25
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.0556

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

Site/Project Name Levy Nuclear Plant Site		Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)		Assessment Area Name or Number Waccasassa (1,2,3,4); Withlacoochee (2,3) Upland Preservation	
FLUCFCs code Multiple		Further classification (optional)		Impact or Mitigation Site? MITIGATION	
				Assessment Area Size (Acres) *see below	
Basin/Watershed Name/Number Waccasassa/Withlacoochee		Affected Waterbody (Class) Class III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) N/A	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Basin divide within the property splits the water flow between the Waccasassa and Withlacoochee basins. Water in the northern portion of the project area (Waccasassa) flows north into Goethe State Park. Water in the southern portion (Withlacoochee), flows south to the Withlacoochee River.</p>					
<p>Assessment area description This assessment area includes all onsite uplands that are being preserved. Pine flatwoods, Pine plantation.</p>					
<p>Significant nearby features Located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River.</p>				<p>Uniqueness (considering the relative rarity in relation to the regional N/A</p>	
<p>Functions Functions include wildlife feeding and refuge, although limited by the surrounding silviculture practices.</p>				<p>Mitigation for previous permit/other historic use N/A</p>	
<p>Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to birds (passerine, raptor and wading bird species), small/medium mammals (hogs, etc.), amphibians and reptiles</p>				<p>Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the</p>	
<p>Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Deer tracks and scat, raccoons, snakes, hog rooting</p>					
<p>Additional relevant factors: <u>*Acreages per Activity Area (AA)</u> Waccasassa: AA 1 (47.3 ac), AA 2 (23.6 ac), AA 3 (3.1 ac), AA 4 (2.5 ac) Withlacoochee: AA 2 (1.8 ac), AA 3 (18.4 ac)</p>					
<p>Assessment conducted by: VAF/DDS-Entrix & Jon Barmore/David Dickson-ESI</p>				<p>Assessment date(s): Dec 2009-Jan 2010 - Entrix & Mar 2011 - ESI</p>	

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

MITIGATION

Site/Project Name Levy Nuclear Plant Site	Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)	Assessment Area Name or Number Upland Preservation
Impact or Mitigation Mitigation	Assessment conducted by: VAF/DDS-Entrix & Jon Barmore/David Dickson-ESI	Assessment date: Dec 2009 - Jan 2010 - Entrix & Mar 2011 - ESI

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	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 <input type="text" value="0"/> with <input type="text" value="7"/>	These upland areas would likely be utilized for development without the preservation of a conservation easement. The forested upland areas offer strong support to neighboring wetland communities.
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) <input type="text" value="U"/> w/o pres or current <input type="text"/> with <input type="text"/>	N/A
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current <input type="text" value="0"/> with <input type="text" value="7"/>	These upland areas would likely be utilized for development without the preservation of a conservation easement. The forested upland areas consist of a diverse assemblage of upland species.

Score = sum of above scores/30 (if uplands/20)
current or w/o pres <input type="text" value="0.0000"/> with <input type="text" value="0.7000"/>

If preservation as mitigation,	
*Preservation adjustment factor = (0 to 1, 1/10th increments)	<input type="text" value="0.06"/>
Adjusted mitigation delta =	<input type="text" value="0.042"/>
*use 1.0 for creation	

For impact assessment areas
FL = delta x acres = <input type="text"/>

Delta = [with-current]
<input type="text" value="0.7"/>

If mitigation (creation or enhancement)		
Time Lag	Years <input type="text" value="11 - 15"/>	t-factor = <input type="text"/>
*Risk factor = (1 to 3, 0.25 increments)		<input type="text"/>
*use 1.0 for preservation		

For mitigation assessment areas
RFG = delta/(t-factor x risk) = <input type="text" value="0.0420"/>

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

Site/Project Name Levy Nuclear Plant Site		Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)		Assessment Area Name or Number Waccasassa (1,2,3,4); Withlacoochee (2,3) Upland Pine Thinning	
FLUCFCs code Multiple		Further classification (optional)		Impact or Mitigation Site? MITIGATION	
				Assessment Area Size (Acres) *see below	
Basin/Watershed Name/Number Waccasassa/Withlacoochee		Affected Waterbody (Class) Class III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) N/A	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Basin divide within the property splits the water flow between the Waccasassa and Withlacoochee basins. Water in the northern portion of the project area (Waccasassa) flows north into Goethe State Park. Water in the southern portion (Withlacoochee), flows south to the Withlacoochee River.</p>					
<p>Assessment area description</p> <p>This assessment area includes all onsite uplands that will have excess pines thinned. Pine flatwoods, Pine plantation.</p>					
<p>Significant nearby features</p> <p>Located south of Goethe State Forest, 8 miles east of the Gulf of Mexico and Waccasassa Bay State Preserve, and approximately 1 mile north of the Cross Florida Barge Canal, Lake Rousseau, and the Withlacoochee River.</p>				<p>Uniqueness (considering the relative rarity in relation to the regional)</p> <p>N/A</p>	
<p>Functions</p> <p>Functions include wildlife feeding and refuge, although limited by the surrounding silviculture practices.</p>				<p>Mitigation for previous permit/other historic use</p> <p>N/A</p>	
<p>Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to)</p> <p>birds (passerine, raptor and wading bird species), small/medium mammals (hogs, etc.), amphibians and reptiles</p>				<p>Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the)</p>	
<p>Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):</p> <p>Deer tracks and scat, raccoons, snakes, hog rooting</p>					
<p>Additional relevant factors:</p> <p><u>*Acreages per Activity Area (AA)</u> Waccasassa: AA 1 (29.2 ac), AA 2 (207.2 ac), AA 3 (34.3 ac), AA 4 (37.2 ac) Withlacoochee: AA 2 (396.5 ac), AA 3 (62.7 ac)</p>					
<p>Assessment conducted by:</p> <p>VAF/DDS-Entrix & Jon Barmore/David Dickson-ESI</p>				<p>Assessment date(s):</p> <p>Dec 2009-Jan 2010 - Entrix & Mar 2011 - ESI</p>	

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

MITIGATION

Site/Project Name Levy Nuclear Plant Site	Application Number SAJ2008-00490 (ACOE), PA08-51C (FDEP)	Assessment Area Name or Number Upland Pine Thinning
Impact or Mitigation Mitigation	Assessment conducted by: VAF/DDS-Entrix & Jon Barmore/David Dickson-ESI	Assessment date: Dec 2009 - Jan 2010 - Entrix & Mar 2011 - ESI

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	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 0 with 8	These upland areas would likely be utilized for development without the preservation of a conservation easement. The forested upland areas offer strong support to neighboring wetland communities and will offer greater support of functions and values with the pines thinned to desirable densities.
.500(6)(b)Water Environment (n/a for uplands) Upland (U) or Wetland (W) U w/o pres or current with	N/A
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 0 with 8	These upland areas would likely be utilized for development without the preservation of a conservation easement. The forested upland areas consist of a diverse assemblage of upland species and will offer a more appropriate diveristy of species with the pines thinned to desirable densities.

Score = sum of above scores/30 (if uplands/20)
current 0.0000 or w/o pres with 0.8000

If preservation as mitigation,
*Preservation adjustment factor = (0 to 1, 1/10th increments)
Adjusted mitigation delta =
*use 1.0 for creation

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
0.8

If mitigation (creation or enhancement)			
Time Lag	Years	t-factor =	1.25
	11 – 15		
*Risk factor = (1 to 3, 0.25 increments)			1.25
*use 1.0 for preservation			

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.5120