

Final Environmental Assessment for Phase II Air Cargo Facility Development

Volume 2: Appendix I

Lakeland Linder International Airport
Polk County, Florida

October 2021

APPENDIX I

Wetland Documentation

I.1 Wetland and Other Surface Water Descriptions

I.2 UMAM Worksheets

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APPENDIX I.1
Wetland and Other Surface Water
Descriptions

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Wetlands and Other Surface Waters within the BSA

ID	FLUCFCS Code and Description ¹	USFWS Classification ²	Acres in BSA
Wetlands			
WL 1	630 – Wetland Forested Mixed	PFO1/3C	5.6
WL 2	621 – Cypress / 631 – Wetland Scrub	PFO2C / PFO1/2C	11.5
WL 6	631 – Wetland Scrub	PFO1/2C	11.2
TOTAL WETLANDS:			28.3
Other Surface Waters			
Ditch 1	510 – Streams and waterways	PUBx	0.3
TOTAL OTHER SURFACE WATERS:			0.3

¹ FDOT, *Florida Land Use, Cover and Forms Classification System (FLUCFCS) Handbook*, 1999.

² Cowardin, Lewis M., et al. *U.S. Fish and Wildlife Service Classification of Wetlands and Deepwater Habitats of the United States*. 1979.

Wetland 1 (WL 1)

FLUCFCS: 630 – Wetland Forested Mixed

USFWS: PFO1/3C – Palustrine, Forested, Broad-leaved Deciduous/Needle-leaved Evergreen, Seasonally Flooded

WL 1 is comprised of a forested wetland that predominantly consists of water oak (*Quercus nigra*), laurel oak (*Q. laurifolia*), red maple (*Acer rubrum*), Caroline willow (*Salix caroliniana*), slash pine (*Pinus elliotii*), Virginia chain fern (*Woodwardia virginica*), and primrose willow (*Ludwigia peruviana*). WL 1 is located directly south of Drane Field Road on the east side of Kelvin Howard Road. An upland-cut drainage ditch within WL 1 flows north to south underneath Drane Field Road. To facilitate drainage of this poorly drained site with high groundwater levels, the USACE constructed a series of relatively deep drainage ditches between 1941 and 1945, including the one that runs through the eastern portion of WL 1. The ditches served to lower groundwater levels at the site, and to provide more efficient conveyance for flows from off-site areas north of Drane Field Road. WL 1 comprises approximately 5.6 acres of the BSA.

WL 2

FLUCFCS: 621 – Cypress / 631 – Wetland Scrub

USFWS: PFO2C / PFO1/2C – Palustrine, Forested, Needle-leaved Deciduous, Seasonally Flooded / Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded

Historically a forested wetland, WL 2 has been cleared of canopy species in the past and is currently identified as a scrub wetland. However, during the April 2020 field review, WL 2 appeared to be succeeding back into a forested wetland with a cypress dome near the center. WL 2 is an isolated system located on the west side of Kelvin Howard Road and is adjacent to a stormwater management facility to the west outside of the BSA. Dominant vegetation within WL 2 includes bald cypress (*Taxodium distichum*), red maple, sweet bay (*Magnolia virginiana*), saltbush (*Baccharis halimifolia*), elderberry (*Sambucus canadensis*), and Virginia chain fern. The fringe of WL 2 consists predominantly of Brazilian pepper (*Schinus terebinthifolia*), peppervine (*Nekemias arborea*), cogon grass (*Imperata cylindrica*), and wax myrtle (*Morella cerifera*). During the wet season, water flows through a shallow drainage ditch in the southern portion of the wetland that flows from east to west and consists of primrose willow, alligatorweed (*Alternanthera philoxeroides*), Carolina willow, and soft rush (*Juncus effusus*). WL 2 comprises approximately 11.5 acres of the BSA.

WL 6**FLUCFCS: 631 – Wetland Scrub****USFWS: PFO1/2C – Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded**

Similar to WL 2, WL 6 historically was a forested wetland but is now a scrub wetland due to historic clearing of canopy species. However, during the April 2020 field review, WL 6 appeared to be succeeding back into a forested wetland. WL 6 is an isolated system located on the east side of Kelvin Howard Road south of Air Park Drive. Dominant vegetation within WL 6 includes bald cypress, red maple, sweet bay, saltbush, elderberry, primrose willow, and Virginia chain fern. WL 6 comprises approximately 11.2 acres of the BSA.

Ditch 1**FLUCFCS: 510 – Streams and Waterways****USFWS: PUBx – Palustrine, Unconsolidated Bottom, Excavated**

Ditch 1 is an upland-cut drainage ditch that is seasonally inundated by surface water during the wet season and intermittently flooded after rainfall events in the dry season. This ditch is located in the proposed fuel area and consists of steep slopes and a sandy bottom. Vegetation within the ditch consists of primrose willow, camphorweed (*Pluchea rosea*), elderberry, pennywort (*Hydrocotyle* spp.), and dogfennel (*Eupatorium capillifolium*). Ditch 1 is part of a stormwater management system that directs water into the stormwater pond directly south of the ditch. It is under the jurisdiction of the SWFWMD through Environmental Resource Permit (ERP) Number 49002237.068 issued in October 2010. This ditch comprises approximately 0.3 acre of the BSA. During the April 29, 2020 field review, the ditch was inundated with approximately 12 inches of water and various fish species were observed.

APPENDIX I.2
UMAM Worksheets

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

Site/Project Name Phase II Air Cargo Facility Development at LAL		Application Number	Assessment Area Name or Number WL 1
FLUCCs code 630: Wetland Forested Mixed	Further classification (optional) PFO1/3C – Palustrine, Forested, Broad-leaved Deciduous/Needle-leaved Evergreen, Seasonally Flooded	Impact or Mitigation Site? Direct Impact	Assessment Area Size 1.2 acres
Basin/Watershed Name/Number Alafia River	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 WL 1 is located on Airport property directly south of Drane Field Rd on the east side of Kelvin Howard Rd. An upland-cut drainage ditch within WL 1 flows north to south underneath Drane Field Rd. WL 1 is bounded by Drane Field Rd to the north, disturbed land and Kelvin Howard Rd to the west, Phase I development of the air cargo facility to the south, and a manufacturing facility to the east.			
Assessment area description WL 1 is comprised of a forested wetland that predominantly consists of water oak, laurel oak, red maple, Caroline willow, slash pine, Virginia chain fern, and primrose willow.			
Significant nearby features Lakeland Linder International Airport		Uniqueness (considering the relative rarity in relation to the regional landscape.) The assessment area is not considered unique, as surrounding areas consists of depressional wetlands.	
Functions Functions include water quality improvement, groundwater recharge, plant habitat, and wildlife foraging habitat.		Mitigation for previous permit/other historic use None known	
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found.) Snakes, small mammals, song birds, frogs.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Eastern indigo snake (T, foraging, breeding, resting); various listed wading birds	
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Evidence of wildlife was not observed during the April 2020 field review.			
Additional relevant factors Hydrology has been impacted by large ditch and industrial build up to east and south.			
Assessment conducted by Tia Norman, AECOM		Assessment date(s) 29-Apr-20	

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

Site/Project Name Phase II Air Cargo Facility Development at LAL	Application Number	Assessment Area Name or Number WL 1
Impact or Mitigation Direct Impact	Assessment conducted by: Tia Norman	Assessment date: 29-Apr-20

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

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	WL 1 is located on Airport property directly south of Drane Field Rd on the east side of Kelvin Howard Rd. WL 1 is bounded by Drane Field Rd to the north, disturbed land and Kelvin Howard Rd to the west, Phase I development of the air cargo facility to the south, and a manufacturing facility to the east. Surrounding development, airport perimeter fencing, and active airfield operations at LAL limit wildlife movement to and from the assessment area.
w/o pres or current	with
3	0

500(6)(b) Water Environment (n/a for uplands)	The hydrology and water environment within WL 1 supports the functions and provides benefits to wildlife at a marginal capacity. However, a large upland-cut ditch bisects the wetland and it appears to have had an adverse effect on the hydrology as a whole in the feature. There is standing water present in the ditch feature; however, none was observed within the forested area of the wetland. The soils observed within this feature were hydric with dark surface, sandy redox and stripped matrix. Water level indicators are not distinct or consistent with the expected hydrologic conditions of the wetland feature.
w/o pres or current	with
4	0

500(6)(c) Community structure	Beneficial wetland vegetation present include red maple and Virginia chain fern. However, because of the hydrology issues a number of successional canopy and shrub species were present including water oak, laurel oak, slash pine, and Carolina willow. There was minor nuisance and exotic vegetation within this wetland which consisted of Peruvian primrose willow. However, this species was primarily limited to the ditch feature within the wetland.
1. Vegetation and/or 2. Benthic Community	
w/o pres or current	
5	0

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.400	0.000

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

For impact assessment areas
FL = delta x acres (1.2) = 0.48

Delta = [with-current]
-0.400

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 Phase II Air Cargo Facility Development at LAL		Application Number	Assessment Area Name or Number WL 1
FLUCCs code 630: Wetland Forested Mixed	Further classification (optional) PFO1/3C – Palustrine, Forested, Broad-leaved Deciduous/Needle-leaved Evergreen, Seasonally Flooded	Impact or Mitigation Site? Secondary Impact	Assessment Area Size 0.3 acre
Basin/Watershed Name/Number Alafia River	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 WL 1 is located on Airport property directly south of Drane Field Rd on the east side of Kelvin Howard Rd. An upland-cut drainage ditch within WL 1 flows north to south underneath Drane Field Rd. WL 1 is bounded by Drane Field Rd to the north, disturbed land and Kelvin Howard Rd to the west, Phase I development of the air cargo facility to the south, and a manufacturing facility to the east.			
Assessment area description WL 1 is comprised of a forested wetland that predominantly consists of water oak, laurel oak, red maple, Caroline willow, slash pine, Virginia chain fern, and primrose willow.			
Significant nearby features Lakeland Linder International Airport		Uniqueness (considering the relative rarity in relation to the regional landscape.) The assessment area is not considered unique, as surrounding areas consists of depressional wetlands.	
Functions Functions include water quality improvement, groundwater recharge, plant habitat, and wildlife foraging habitat.		Mitigation for previous permit/other historic use None known	
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found.) Snakes, small mammals, song birds, frogs.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Eastern indigo snake (T, foraging, breeding, resting); various listed wading birds	
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Evidence of wildlife was not observed during the April 2020 field review.			
Additional relevant factors Hydrology has been impacted by large ditch and industrial build up to east and south.			
Assessment conducted by Tia Norman, AECOM		Assessment date(s) 29-Apr-20	

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

Site/Project Name Phase II Air Cargo Facility Development at LAL	Application Number	Assessment Area Name or Number WL 1
Impact or Mitigation Secondary Impact	Assessment conducted by Tia Norman	Assessment date 29-Apr-20

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

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	WL 1 is located on Airport property directly south of Drane Field Rd on the east side of Kelvin Howard Rd. WL 1 is bounded by Drane Field Rd to the north, disturbed land and Kelvin Howard Rd to the west, Phase I development of the air cargo facility to the south, and a manufacturing facility to the east. Surrounding development, airport perimeter fencing, and active airfield operations at LAL limit wildlife movement to and from the assessment area.	
	w/o pres or current 3	with 2

500(6)(b) Water Environment (n/a for uplands)	The hydrology and water environment within WL 1 supports the functions and provides benefits to wildlife at a marginal capacity. However, a large upland-cut ditch bisects the wetland and it appears to have had an adverse effect on the hydrology as a whole in the feature. There is standing water present in the ditch feature; however, none was observed within the forested area of the wetland. The soils observed within this feature were hydric with dark surface, sandy redox and stripped matrix. Water level indicators are not distinct or consistent with the expected hydrologic conditions of the wetland feature.	
	w/o pres or current 4	with 4

500(6)(c) Community structure	Beneficial wetland vegetation present include red maple and Virginia chain fern. However, because of the hydrology issues a number of successional canopy and shrub species were present including water oak, laurel oak, slash pine, and Carolina willow. There was minor nuisance and exotic vegetation within this wetland which consisted of Peruvian primrose willow. However, this species was primarily limited to the ditch feature within the wetland.	
	1. Vegetation and/or 2. Benthic Community	
w/o pres or current 5	with 4	

Score = sum of above scores/30 (if uplands, divide by 20)	
current	with
0.400	0.333

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

For impact assessment areas
FL = delta x acres (0.3) = 0.02

Delta = [with-current]
-0.067

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 Phase II Air Cargo Facility Development at LAL		Application Number	Assessment Area Name or Number WL 2	
FLUCCs code 621: Cypress	Further classification (optional) PFO2C – Palustrine, Forested, Needle-leaved Deciduous, Seasonally Flooded		Impact or Mitigation Site? Direct Impact	Assessment Area Size 1.4 acres
Basin/Watershed Name/Number Alafia River	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 WL 2 is an isolated system located on Airport property on the west side of Kelvin Howard Rd and is adjacent to a stormwater management facility to the west outside of the project area. WL 2 is bounded by disturbed land and Drane Field Rd to the north, disturbed land and Kelvin Howard Rd to the east, manufacturing facilities and an artificial pond to the west, and LAL airfield to the south.				
Assessment area description The assessment area comprises the central portion of WL 2 and consists of a cypress dome dominated by bald cypress.				
Significant nearby features Lakeland Linder International Airport		Uniqueness (considering the relative rarity in relation to the regional landscape.) The assessment area is not considered unique, as surrounding areas consists of depressional wetlands.		
Functions Functions include water quality improvement, groundwater recharge, plant habitat, and wildlife foraging habitat.		Mitigation for previous permit/other historic use None known		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Snakes, small mammals, song birds, frogs.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Eastern indigo snake (T, foraging, breeding, resting); various listed wading birds		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Evidence of wildlife was not observed during the April 2020 field review.				
Additional relevant factors: The assessment area has been affected by historic clearing and surrounding development activities.				
Assessment conducted by: Tia Norman, AECOM		Assessment date(s): 29-Apr-20		

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

Site/Project Name Phase II Air Cargo Facility Development at LAL	Application Number	Assessment Area Name or Number WL 2
Impact or Mitigation Direct Impact	Assessment conducted by: Tia Norman	Assessment date: 29-Apr-20

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

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	WL 2 is an isolated system located on Airport property on the west side of Kelvin Howard Rd and adjacent to a stormwater management facility to the west outside of the project area. WL 2 is bounded by disturbed land and Drane Field Rd to the north, disturbed land and Kelvin Howard Rd to the east, manufacturing facilities and an artificial pond to the west, and LAL airfield to the south. Surrounding development, airport perimeter fencing, and active airfield operations at LAL limit wildlife movement to and from the assessment area.

500(6)(b)Water Environment (n/a for uplands)	w/o pres or current	with	The hydrology and water environment within WL 2 supports the functions and provides benefits to wildlife at a marginal capacity. Water level indicators are not distinct or consistent with the expected hydrologic conditions of the wetland feature.

.500(6)(c)Community structure	w/o pres or current	with	The assessment area is dominated by bald cypress with little to no exotic/invasive species present.

Score = sum of above scores/30 (if uplands, divide by 20)	
current	with
0.600	0.000

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

For impact assessment areas
FL = delta x acres (1.4) = 0.86

Delta = [with-current]
-0.600

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 Phase II Air Cargo Facility Development at LAL		Application Number	Assessment Area Name or Number WL 2
FLUCCs code 631: Wetland Scrub	Further classification (optional) PFO1/2C – Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact or Mitigation Site? Direct Impact	Assessment Area Size 10.1 acres
Basin/Watershed Name/Number Alafia River	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 WL 2 is an isolated system located on Airport property on the west side of Kelvin Howard Rd and is adjacent to a stormwater management facility to the west outside of the project area. WL 2 is bounded by disturbed land and Drane Field Rd to the north, disturbed land and Kelvin Howard Rd to the east, manufacturing facilities and an artificial pond to the west, and LAL airfield to the south.			
Assessment area description WL 2 has been cleared of canopy species in the past and is currently identified as a scrub wetland. As of April 2020, WL 2 appears to be succeeding back into a forested wetland. Dominant vegetation includes bald cypress, red maple, sweet bay, saltbush, elderberry, and Virginia chain fern. The fringe consists of Brazilian pepper, peppervine, cogon grass, and wax myrtle. A shallow drainage ditch present in the southern portion of the wetland flows from east to west and consists of primrose willow, alligatorweed, Carolina willow, and soft rush.			
Significant nearby features Lakeland Linder International Airport	Uniqueness (considering the relative rarity in relation to the regional landscape.) The assessment area is not considered unique, as surrounding areas consists of depressional wetlands.		
Functions Functions include water quality improvement, groundwater recharge, plant habitat, and wildlife foraging habitat.	Mitigation for previous permit/other historic use None known		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Snakes, small mammals, song birds, frogs.	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Eastern indigo snake (T, foraging, breeding, resting); various listed wading birds		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Evidence of wildlife was not observed during the April 2020 field review.			
Additional relevant factors: Hydrology has been impacted by large ditch in southern portion of wetland that flows into artificial pond west of the wetland.			
Assessment conducted by: Tia Norman, AECOM		Assessment date(s): 29-Apr-20	

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

Site/Project Name Phase II Air Cargo Facility Development at LAL	Application Number	Assessment Area Name or Number WL 2
Impact or Mitigation Impact	Assessment conducted by Tia Norman	Assessment date 29-Apr-20

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

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	WL 2 is located on Airport property on the west side of Kelvin Howard Rd and extends westward outside of the project area. WL 2 is bounded by disturbed land and Drane Field Rd to the north, disturbed land and Kelvin Howard Rd to the east, manufacturing facilities and an artificial pond to the west, and LAL airfield to the south. Surrounding development, airport perimeter fencing, and active airfield operations at LAL limit wildlife movement to and from the assessment area.
	3	0		

500(6)(b) Water Environment (n/a for uplands)	w/o pres or current		with	The hydrology and water environment within WL 2 supports the functions and provides benefits to wildlife at a marginal capacity. However, a large cut ditch bisects the southern portion of the wetland and it appears to have had an adverse effect on the hydrology as a whole in the feature. There is standing water present in the ditch feature; however, none was observed within the forested area of the wetland. The soils observed within this feature were hydric with dark surface. Water level indicators are not distinct or consistent with the expected hydrologic conditions of the wetland feature.
	5	0		

500(6)(c) Community structure	w/o pres or current		with	Beneficial wetland vegetation present include red maple, bald cypress, sweet bay, saltbush, elderberry, and Virginia chain fern. However, because of the hydrology issues a number of successional canopy and shrub species are present. There was nuisance and exotic vegetation within this wetland on the fringes which consisted of Brazilian pepper, peppervine, and cogon grass. The ditch consisted of nuisance and exotic vegetation consisting of Peruvian primrose willow and alligatorweed.
	5	0		

Score = sum of above scores/30 (if uplands, divide by 20)	
current	with
0.433	0.000

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

For impact assessment areas
FL = delta x acres (10.1) = 4.8

Delta = [with-current]
-0.433

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 Phase II Air Cargo Facility Development at LAL		Application Number	Assessment Area Name or Number WL 2
FLUCCs code 631: Wetland Scrub	Further classification (optional) PFO1/2C – Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact or Mitigation Site? Secondary Impact	Assessment Area Size 0.7 acre
Basin/Watershed Name/Number Alafia River	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 WL 2 is an isolated system located on Airport property on the west side of Kelvin Howard Rd and is adjacent to a stormwater management facility to the west outside of the project area. WL 2 is bounded by disturbed land and Drane Field Rd to the north, disturbed land and Kelvin Howard Rd to the east, manufacturing facilities and an artificial pond to the west, and LAL airfield to the south.			
Assessment area description WL 2 has been cleared of canopy species in the past and is currently identified as a scrub wetland. As of April 2020, WL 2 appears to be succeeding back into a forested wetland. Dominant vegetation includes bald cypress, red maple, sweet bay, saltbush, elderberry, and Virginia chain fern. The fringe consists of Brazilian pepper, peppervine, cogon grass, and wax myrtle. A shallow drainage ditch present in the southern portion of the wetland flows from east to west and consists of primrose willow, alligatorweed, Carolina willow, and soft rush.			
Significant nearby features Lakeland Linder International Airport	Uniqueness (considering the relative rarity in relation to the regional landscape.) The assessment area is not considered unique, as surrounding areas consists of depressional wetlands.		
Functions Functions include water quality improvement, groundwater recharge, plant habitat, and wildlife foraging habitat.	Mitigation for previous permit/other historic use None known		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Snakes, small mammals, song birds, frogs.	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Eastern indigo snake (T, foraging, breeding, resting); various listed wading birds		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Evidence of wildlife was not observed during the April 2020 field review.			
Additional relevant factors: Hydrology has been impacted by large ditch in southern portion of wetland that flows into artificial pond west of the wetland.			
Assessment conducted by: Tia Norman, AECOM		Assessment date(s): 29-Apr-20	

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

Site/Project Name Phase II Air Cargo Facility Development at LAL	Application Number	Assessment Area Name or Number WL 2
Impact or Mitigation Secondary Impact	Assessment conducted by Tia Norman	Assessment date 29-Apr-20

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

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	WL 2 is located on Airport property on the east side of Kelvin Howard Rd and extends westward outside of the project area. WL 2 is bounded by disturbed land and Drane Field Rd to the north, disturbed land and Kelvin Howard Rd to the east, manufacturing facilities and an artificial pond to the west, and LAL airfield to the south. Surrounding development, airport perimeter fencing, and active airfield operations at LAL limit wildlife movement to and from the assessment area.
	4	3		

500(6)(b) Water Environment (n/a for uplands)	w/o pres or current		with	The hydrology and water environment within WL 2 supports the functions and provides benefits to wildlife at a marginal capacity. However, a large cut ditch bisects the southern portion of the wetland and it appears to have had an adverse effect on the hydrology as a whole in the feature. There is standing water present in the ditch feature; however, none was observed within the forested area of the wetland. The soils observed within this feature were hydric with dark surface. Water level indicators are not distinct or consistent with the expected hydrologic conditions of the wetland feature.
	5	5		

500(6)(c) Community structure	w/o pres or current		with	Beneficial wetland vegetation present include red maple, bald cypress, sweet bay, saltbush, elderberry, and Virginia chain fern. However, because of the hydrology issues a number of successional canopy and shrub species are present. There was nuisance and exotic vegetation within this wetland on the fringes which consisted of Brazilian pepper, peppervine, and cogon grass. The ditch consisted of nuisance and exotic vegetation consisting of Peruvian primrose willow and alligatorweed.
	6	5		

Score = sum of above scores/30 (if uplands, divide by 20)	
current	with
0.500	0.433

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

For impact assessment areas
FL = delta x acres (0.7) = 0.05

Delta = [with-current]
-0.067

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 Phase II Air Cargo Facility Development at LAL		Application Number	Assessment Area Name or Number WL 6
FLUCCs code 631: Wetland Scrub	Further classification (optional) PFO1/2C – Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact or Mitigation Site? Direct Impact	Assessment Area Size 11.2 acres
Basin/Watershed Name/Number Alafia River	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 WL 6 is an isolated system located on Airport property on the east side of Kelvin Howard Rd south of Air Park Dr and is bounded by Phase I development of the air cargo facility to the east, disturbed land and Air Park Dr to the north, Kelvin Howard Rd to the west, and LAL airfield to the south.			
Assessment area description WL 6 has been cleared of canopy species in the past and is currently identified as a scrub wetland. As of April 2020, WL 2 appears to be succeeding back into a forested wetland. Dominant vegetation includes bald cypress, red maple, sweet bay, saltbush, elderberry, primrose willow, and Virginia chain fern.			
Significant nearby features Lakeland Linder International Airport	Uniqueness (considering the relative rarity in relation to the regional landscape) The assessment area is not considered unique, as surrounding areas consists of depressional wetlands.		
Functions Functions include water quality improvement, groundwater recharge, plant habitat, and wildlife foraging habitat.	Mitigation for previous permit/other historic use None known		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Snakes, small mammals, song birds, frogs.	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Eastern indigo snake (T, foraging, breeding, resting); various listed wading birds		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Evidence of wildlife was not observed during the April 2020 field review.			
Additional relevant factors Hydrology has been impacted by surrounding development.			
Assessment conducted by Tia Norman, AECOM		Assessment date(s) 29-Apr-20	

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

Site/Project Name Phase II Air Cargo Facility Development at LAL	Application Number	Assessment Area Name or Number WL 6
Impact or Mitigation Direct Impact	Assessment conducted by: Tia Norman	Assessment date: 29-Apr-20

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

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		WL 6 is located on Airport property on the east side of Kelvin Howard Rd south of Air Park Dr and is bounded by Phase I development of the air cargo facility to the east, disturbed land and Air Park Dr to the north, Kelvin Howard Rd to the west, and LAL airfield to the south. Surrounding development, airport perimeter fencing, and active airfield operations at LAL limit wildlife movement to and from the assessment area.
	3			0	

500(6)(b)Water Environment (n/a for uplands)	w/o pres or current		with		The hydrology and water environment within WL 6 supports the functions and provides benefits to wildlife at a marginal capacity. However, surrounding development and adjacent disturbance appears to have had an adverse effect on the hydrology as a whole in the feature. The soils observed within this feature were hydric with organic bodies and redox concentrations. Water level indicators are not distinct or consistent with the expected hydrologic conditions of the wetland feature.
	5			0	

.500(6)(c)Community structure	w/o pres or current		with		Beneficial wetland vegetation present include red maple, bald cypress, sweet bay, saltbush, elderberry, and Virginia chain fern. However, because of the hydrology issues a number of successional canopy and shrub species are present. There was nuisance and exotic vegetation within this wetland which consisted of Peruvian primrose willow.
	6			0	

Score = sum of above scores/30 (if uplands, divide by 20)	
current	with
0.467	0.000

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

For impact assessment areas
FL = delta x acres (11.2) = 5.25

Delta = [with-current]
-0.467

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

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

