

**DEPARTMENT OF THE ARMY PERMIT APPLICATION  
MAY 2020**

**COLLIER COUNTY  
COMPREHENSIVE WATERSHED IMPROVEMENT PLAN  
COLLIER COUNTY, FLORIDA**

**SUPPLEMENTAL INFORMATION  
ATTACHMENT 8  
UNIFORM MITIGATION ASSESSMENT METHOD SUMMARIES**

***REVISED: MAY 2020***

**UNIFORM MITIGATION ASSESSMENT METHOD SUMMARY**

Site/Project Name:	Application Number:	Date:
Collier County Comprehensive Watershed Improvement Plan	SFWMD: 200214-2805	May 2020

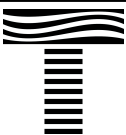
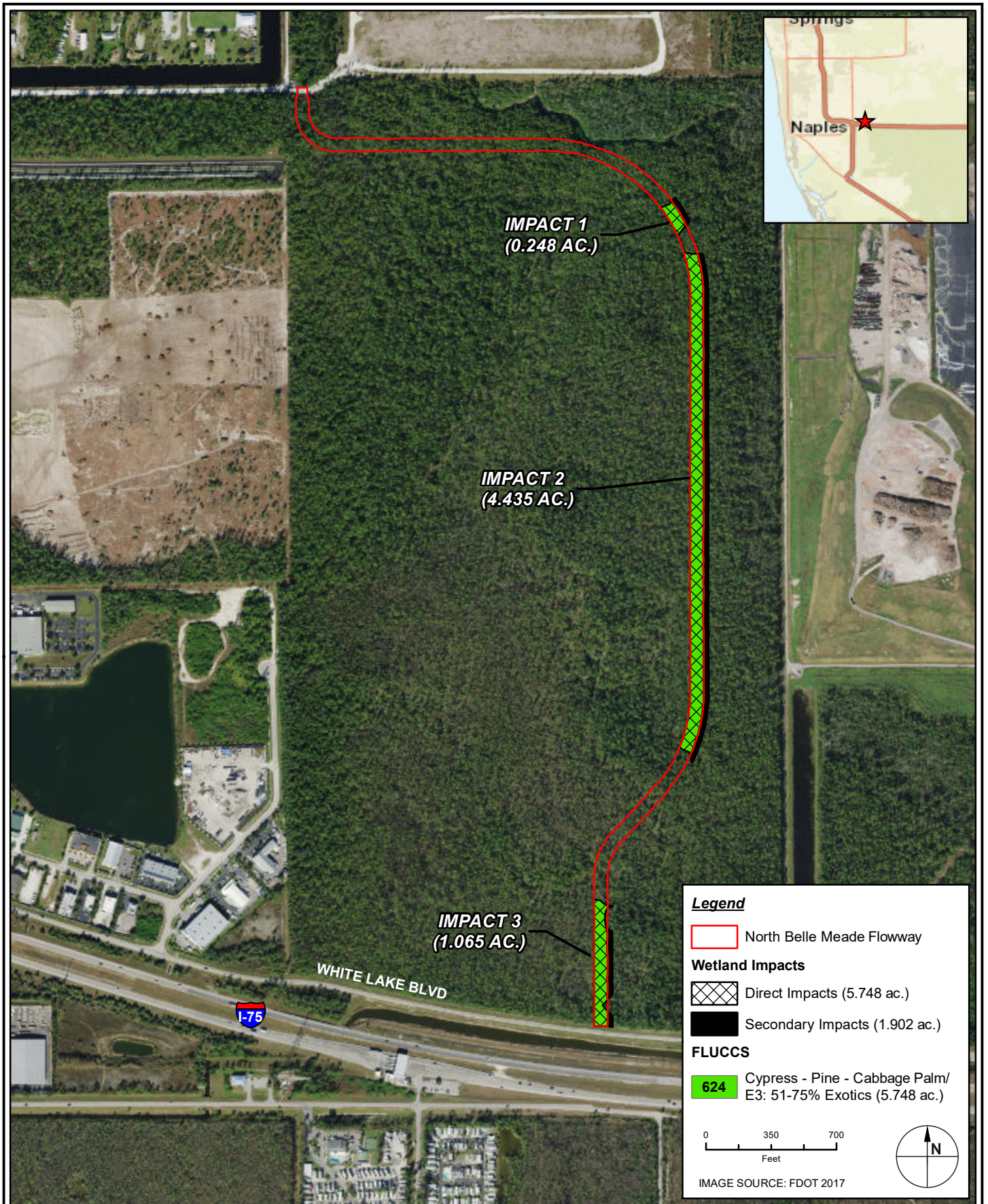
**IMPACT SUMMARY**

Assessment Area	Impact Type	L&L Support		Water Environment		Community Structure		Impact Delta	Acres	Functional Loss	
		Current	w/Impact	Current	w/Impact	Current	w/Impact				
1	Impact 1 - 3	Direct	4	0	3	0	3	0	-0.333	5.748	-1.92
2	Impact 4 - 7	Direct	7	0	5	0	7	0	-0.633	10.939	-6.93
3	Impact 8 - 9	Direct	7	0	5	0	6	0	-0.600	4.585	-2.75
4	Impact 10 -11	Direct	7	0	5	0	4	0	-0.533	0.953	-0.51
5	Impact 12	Direct	6	0	3	0	2	0	-0.367	0.511	-0.19
6	Impact 13	Direct	6	0	3	0	2	0	-0.367	0.043	-0.02
7	Impact 14	Direct	6	0	3	0	2	0	-0.367	0.916	-0.34
8	Impact 15	Direct	6	0	3	0	2	0	-0.367	1.071	-0.39
9	Impact 16, 17, 19, 23	Direct	4	0	3	0	3	0	-0.333	7.552	-2.52
10	Impact 18	Direct	5	0	4	0	6	0	-0.500	1.882	-0.94
11	Impact 20 - 21	Direct	5	0	4	0	7	0	-0.533	0.452	-0.24
12	Impact 22	Direct	5	0	4	0	7	0	-0.533	0.340	-0.18
13	Impact 1 - 3	Secondary	4	3	3	3	3	3	-0.033	1.902	-0.06
14	Impact 4 - 7	Secondary	7	6	5	5	7	7	-0.033	2.458	-0.08
15	Impact 8 - 9	Secondary	7	6	5	5	6	6	-0.033	0.748	-0.02
16	Impact 10 -11	Secondary	7	6	5	5	4	4	-0.033	0.974	-0.03
17	Impact 12	Secondary	6	5	3	3	2	2	-0.033	0.319	-0.01
18	Impact 14	Secondary	6	5	3	3	2	2	-0.033	0.739	-0.02
19	Impact 15	Secondary	6	5	3	3	2	2	-0.033	0.444	-0.01
20	Impact 16, 17, 19, 23	Secondary	4	3	3	3	3	3	-0.033	8.895	-0.30
21	Impact 18	Secondary	5	4	4	4	6	6	-0.033	2.695	-0.09
22	Impact 20 - 21	Secondary	5	4	4	4	7	7	-0.033	0.619	-0.02
23	Impact 22	Secondary	5	4	4	4	7	7	-0.033	0.356	-0.01
<b>TOTAL</b>									<b>55.141</b>	<b>-17.59</b>	

**MITIGATION SUMMARY**

Assessment Area	Mitigation Type	L&L Support		Water Environment		Community Structure		Mitigation Delta	Time Lag	Risk	Relative Functional Gain	Acres	Functional Gain	
		Current	w/Mit	Current	w/Mit	Current	w/Mit							
1	Mitigation 1	Restoration	7	7	5	6	7	7	0.033	1.00	1.00	0.033	527.700	17.59
2														
3														
4														
5														
6														
7														
8														
9														
10														

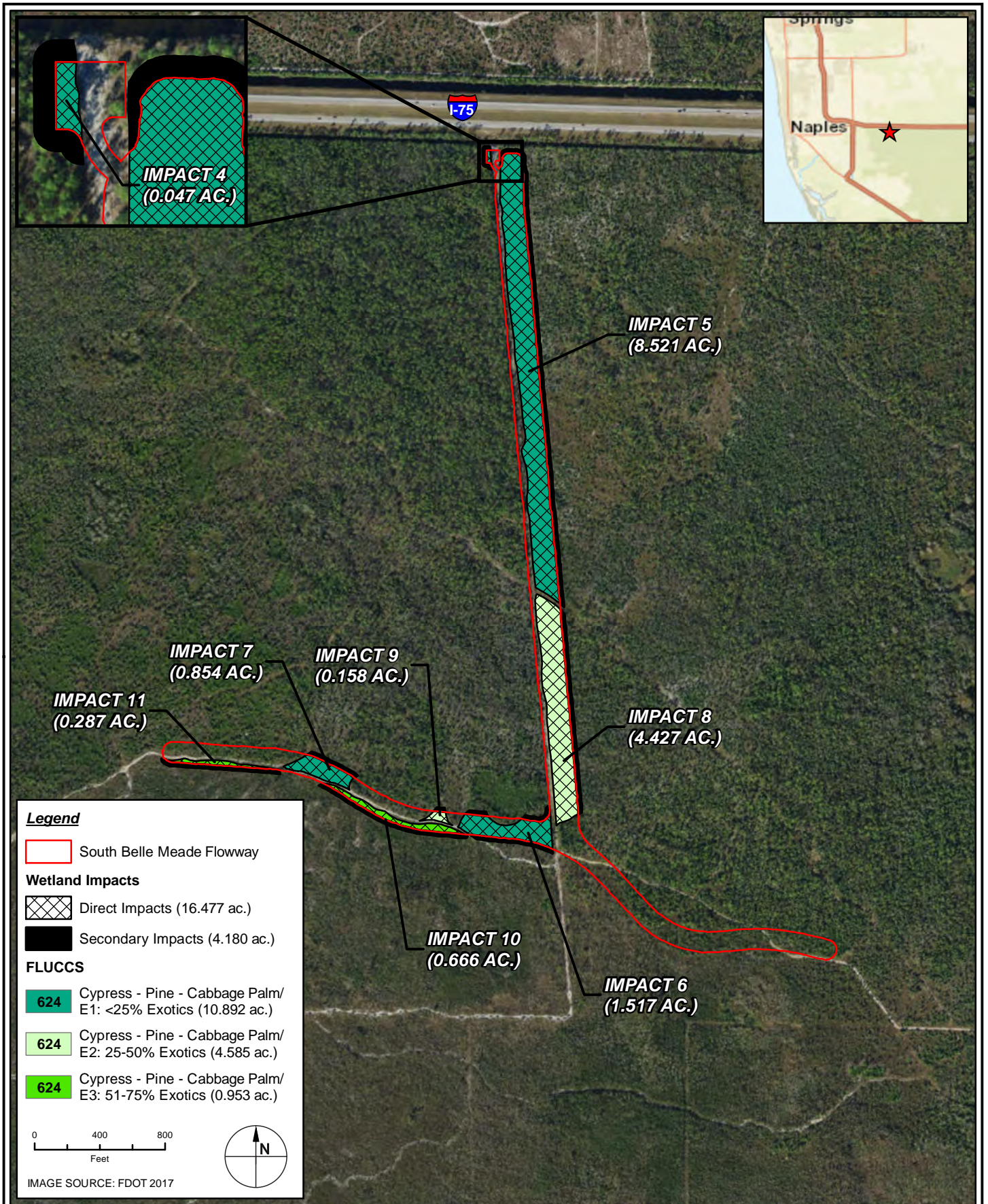
<b>Total Functional Loss</b>	<b>-17.59</b>
<b>Total Functional Gain</b>	<b>17.59</b>
<b>Net Functional Gain</b>	<b>0.00</b>



**TAYLOR ENGINEERING INC.**  
 10199 SOUTHSIDE BOULEVARD  
 SUITE 310  
 JACKSONVILLE, FL 32256  
 CERTIFICATE OF AUTHORIZATION # 4815

**WETLAND IMPACTS**  
 NORTH BELLE MEADE FLOWWAY  
 COLLIER COUNTY CWIP  
 COLLIER COUNTY, FLORIDA

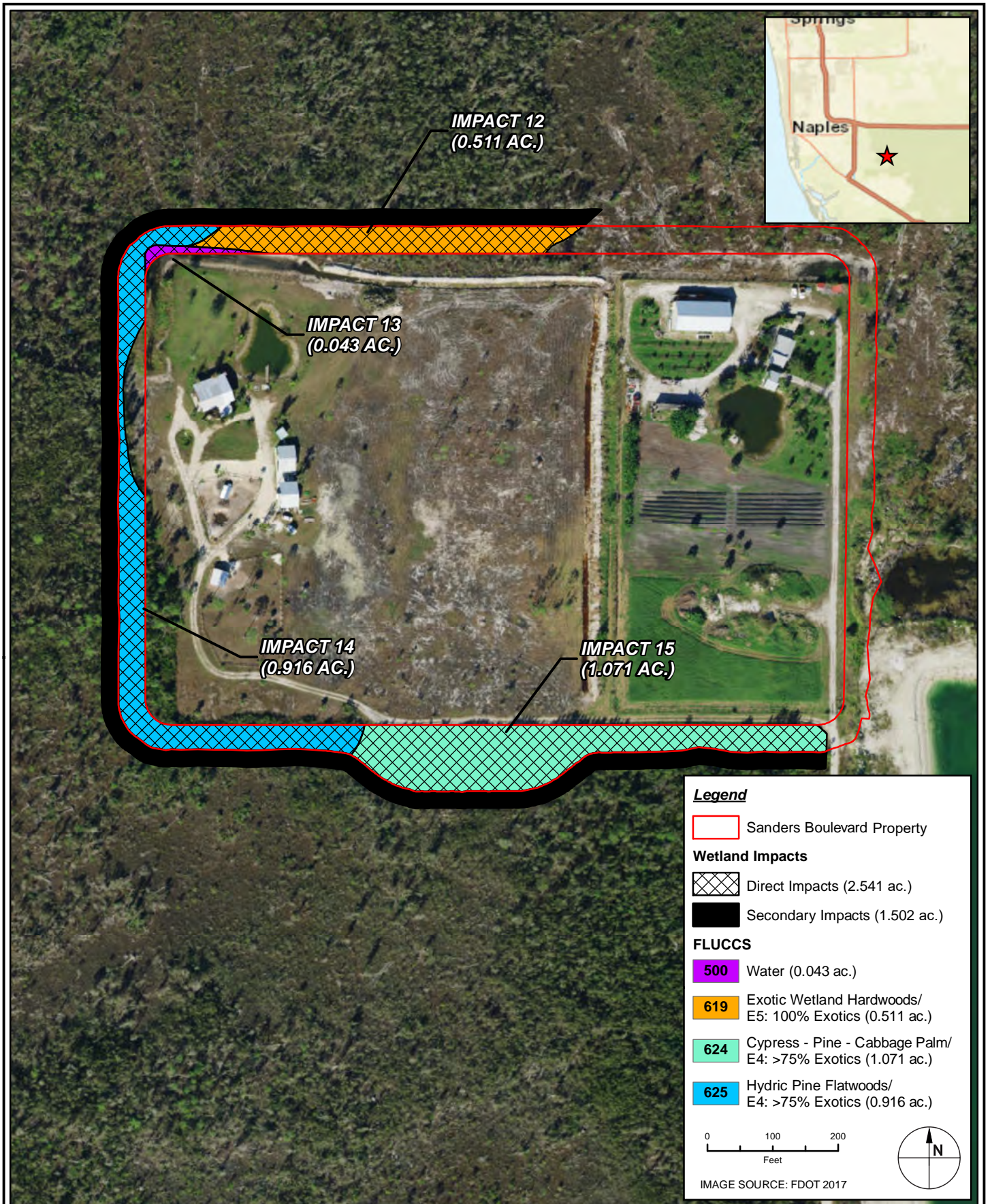
PROJECT	C2018-052
DRAWN BY	KM
SHEET	
DATE	APR 2020



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WETLAND IMPACTS  
 SOUTH BELLE MEADE FLOWWAY  
 COLLIER COUNTY CWIP  
 COLLIER COUNTY, FLORIDA

PROJECT	C2018-052
DRAWN BY	KM
SHEET	
DATE	APR 2020




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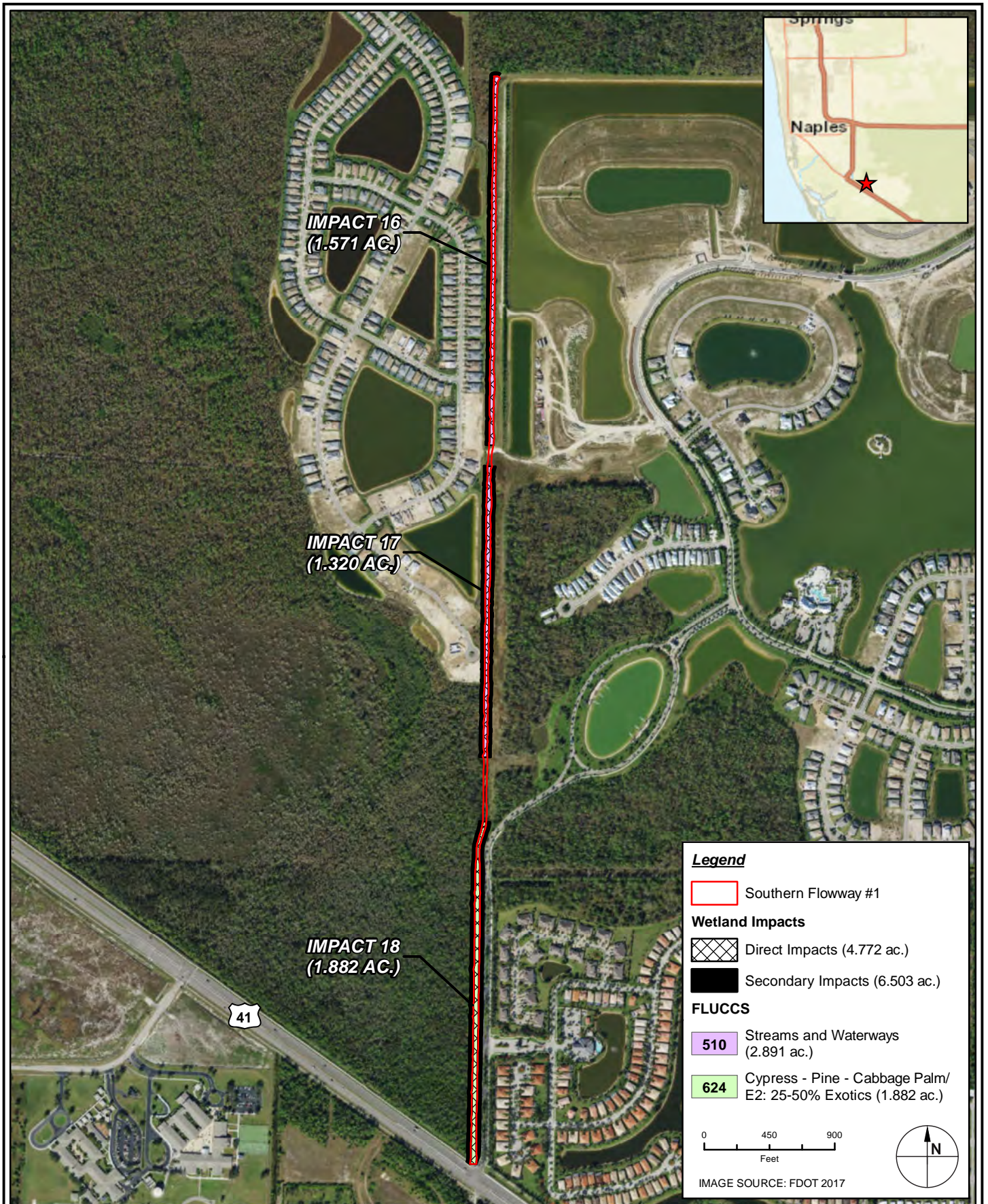
**WETLAND IMPACTS**  
**SANDERS BOULEVARD PROPERTY**  
 COLLIER COUNTY CWIP  
 COLLIER COUNTY, FLORIDA


PROJECT	C2018-052
DRAWN BY	KM
SHEET	
DATE	APR 2020



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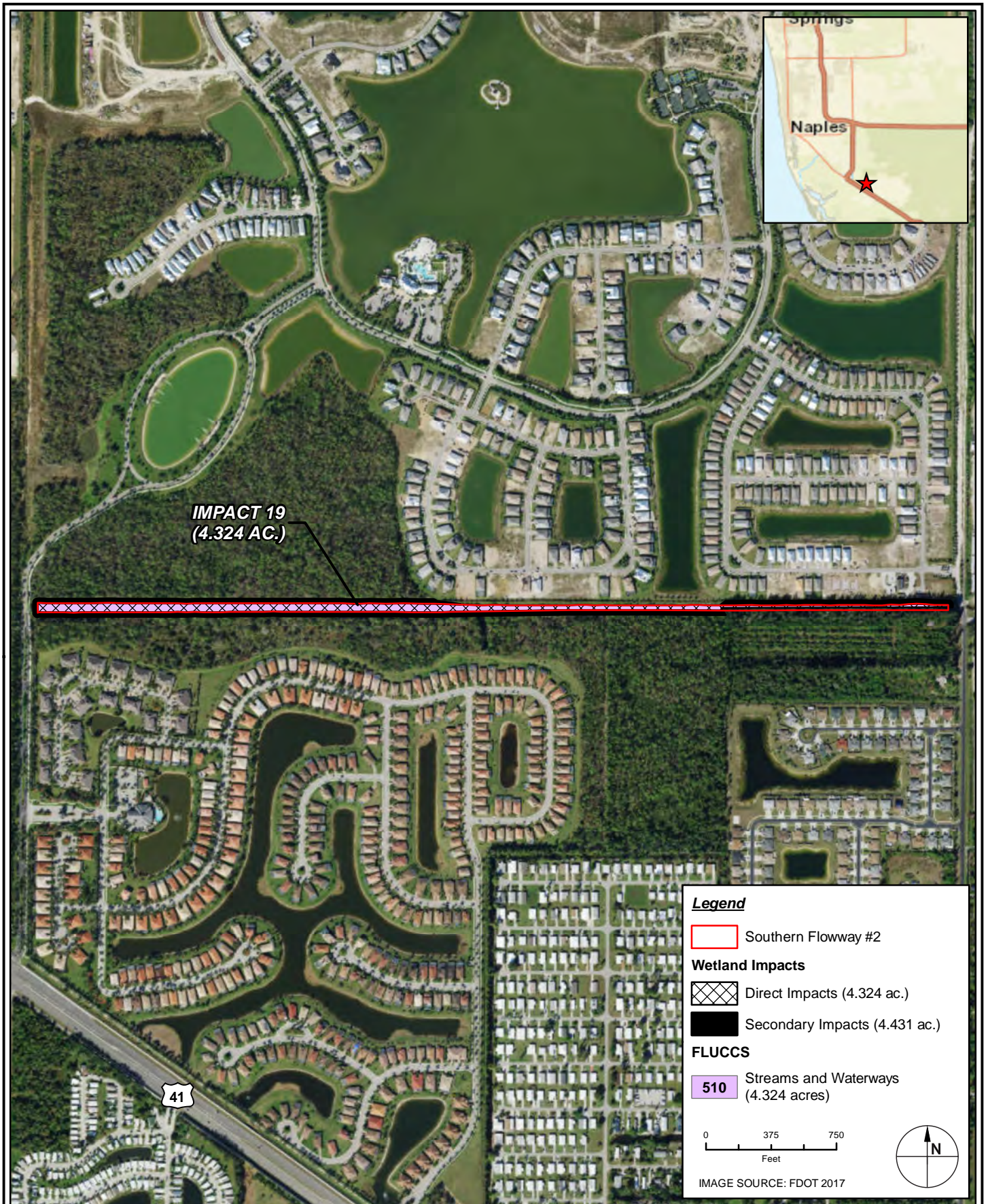
WETLAND IMPACTS  
PEDESTRIAN PATHWAY  
COLLIER COUNTY CWIP  
COLLIER COUNTY, FLORIDA





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**WETLAND IMPACTS**  
**SOUTHERN FLOWWAY #1**  
**COLLIER COUNTY CWIP**  
**COLLIER COUNTY, FLORIDA**

PROJECT	C2018-052
DRAWN BY	KM
SHEET	
DATE	APR 2020




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**WETLAND IMPACTS**  
SOUTHERN FLOWWAY #2  
COLLIER COUNTY CWIP  
COLLIER COUNTY, FLORIDA

PROJECT	C2018-052
DRAWN BY	KM
SHEET	
DATE	APR 2020

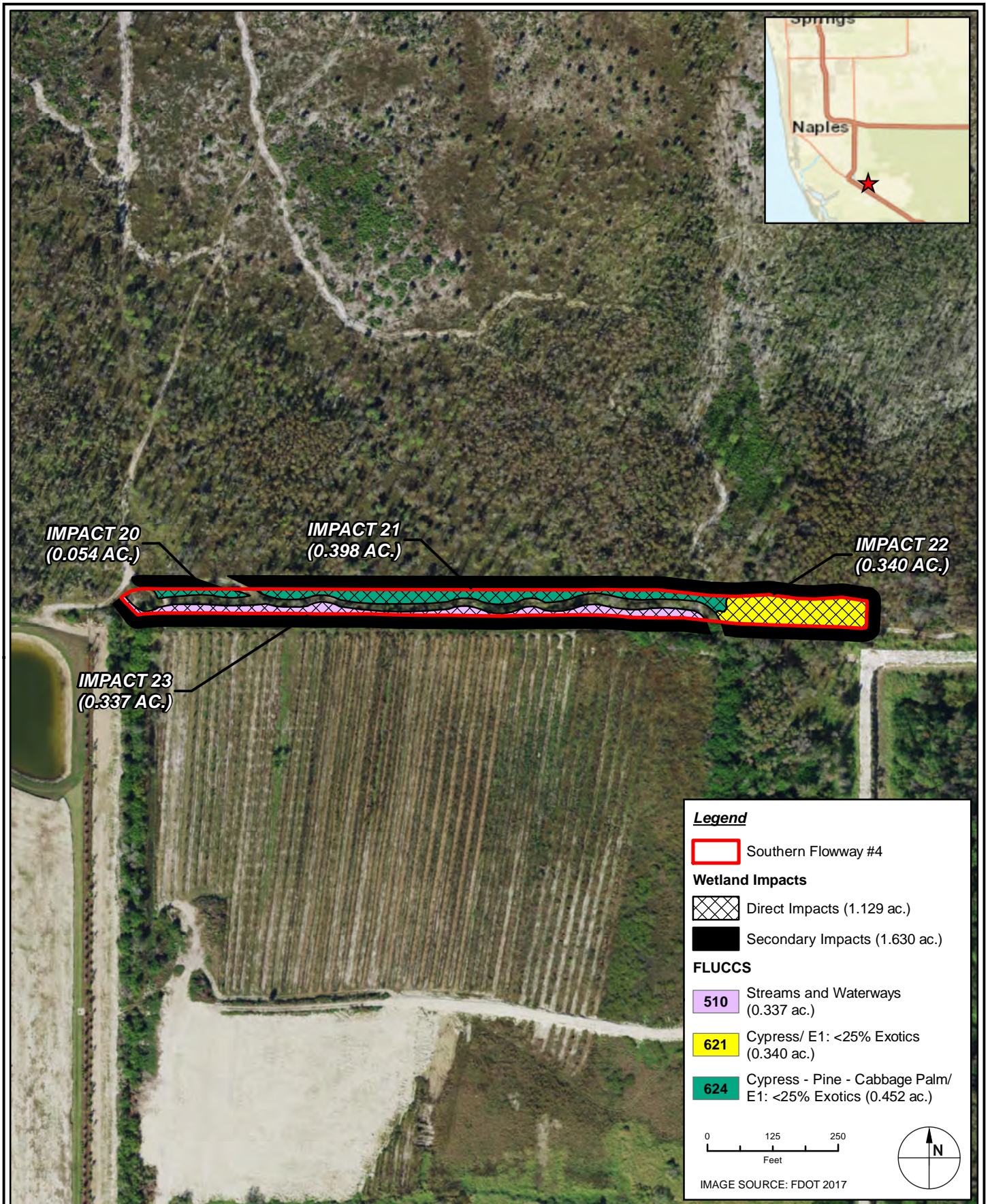





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**WETLAND IMPACTS**  
**SOUTHERN FLOWWAY #3**  
**COLLIER COUNTY CWIP**  
**COLLIER COUNTY, FLORIDA**

PROJECT	C2018-052
DRAWN BY	KM
SHEET	
DATE	APR 2020




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**WETLAND IMPACTS**  
 SOUTHERN FLOWWAY #4  
 COLLIER COUNTY CWIP  
 COLLIER COUNTY, FLORIDA

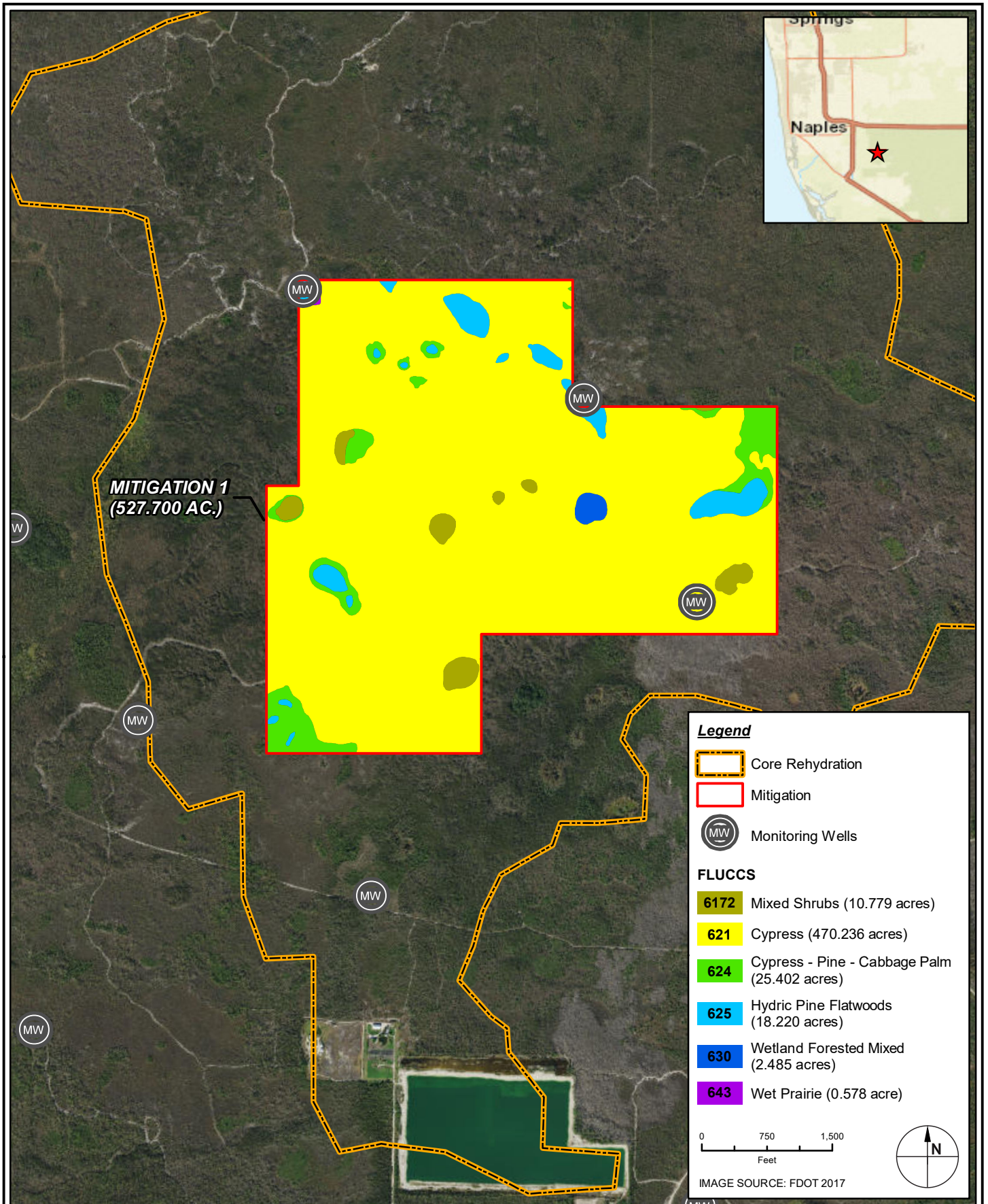
PROJECT	C2018-052
DRAWN BY	KM
SHEET	
DATE	APR 2020



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LOCATION MAP  
 WETLAND MITIGATION  
 COLLIER COUNTY CWIP  
 COLLIER COUNTY, FLORIDA

PROJECT	C2018-052
DRAWN BY	KM
SHEET	
DATE	JUN 2020



**TAYLOR ENGINEERING INC.**  
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EXISTING LAND USE  
 WETLAND MITIGATION  
 COLLIER COUNTY CWIP  
 COLLIER COUNTY, FLORIDA

PROJECT	C2018-052
DRAWN BY	KM
SHEET	
DATE	JUN 2020

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

Site/Project Name Collier County CWIP		Application Number SFWMD: 200214-2805		Assessment Area Name or Number Impact 1 -3	
FLUCCs code 624-E3		Further classification (optional) Cypress-Pine-Cabbage Palm (51-75% exotics)		Impact or Mitigation Site? Impact - Direct	
Assessment Area Size 5.748					
Basin/Watershed Name/Number Rookery Bay		Affected Waterbody (Class) III		Special Classification (i.e. OFW, AP, other local/state/federal designation of im) None	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>These assessment area (AA) once comprised a portion of a large wetland system that is now disconnected and fragmented by roads, canals, residential and commercial development, and a landfill. The hydrology of the site has been altered by the surrounding infrastructure and development-related stormwater drainage.</p>					
<p>Assessment area description</p> <p>AA consists of a cypress-pine-cabbage palm wetland community infested (51-75% cover) with exotic/invasive species. Canopy cover consists of a mix of bald cypress (<i>Taxodium distichum</i>), slash pine (<i>Pinus elliotii</i>), cabbage palm (<i>Sabal palmetto</i>), melaleuca (<i>Melaleuca quinquenervia</i>), and earleaf acacia (<i>Acacia auriculiformis</i>). Common groundcover species include swamp fern (<i>Blechnum serrulatum</i>) and Ceasarweed (<i>Urena lobata</i>).</p>					
<p>Significant nearby features</p> <p>North: Collier County Resource Recovery Park; East: Collier County Landfill; South: I-75 and mostly undeveloped, vacant land; West: Collier County Sports Complex</p>			<p>Uniqueness (considering the relative rarity in relation to the regional landscape.)</p> <p>Not unique to region</p>		
<p>Functions</p> <p>Provides cover, substrate, and refuge; breeding; foraging; water storage; water quality improvement; groundwater recharge; wildlife habitat</p>			<p>Mitigation for previous permit/other historic use</p> <p>None</p>		
<p>Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)</p> <p>Birds ( green heron, red-bellied woodpecker, red shouldered hawk, herons, egrets); snakes (banded and green watersnakes, cottonmouth, mud, black racer); turtles (musk, red-bellied cooter, mud); frogs (leopard, pig, bull, green tree); mammals (feral hog, opossum, armadillo, raccoon, white-tailed deer, squirrels, Florida panther)</p>			<p>Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)</p> <p>Florida panther (state - E, fed - E); Big Cypress fox squirrel (state - T); Florida bonneted bat (state - E, federal - E)</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>Taylor Engineering, Inc.</p>			<p>Assessment date(s):</p> <p>May 2020</p>		

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

Site/Project Name Collier County CWIP	Application Number SFWMD: 200214-2805	Assessment Area Name or Number Impact 1 -3
Impact or Mitigation Impact - Direct	Assessment conducted by: Taylor Engineering, Inc.	Assessment date: May 2020

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

<b>Optimal (10)</b>	<b>Moderate(7)</b>	<b>Minimal (4)</b>	<b>Not Present (0)</b>
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	Availability of habitat outside the AA is poor to fair. The AA is bordered by undeveloped wetlands and uplands to the north, east, and west. White Lake Blvd and I-75 borders the AA to the south. Vegetation communities in close proximity to the AA contain a high fraction of exotic/invasive species. Land uses outside the AA (canals, landfill, commercial/residential development, roads) adversely affect wildlife access to and utilization of the AA.				
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">4</td> <td align="center">0</td> </tr> </table>	w/o pres or current	with	4	0	
w/o pres or current	with				
4	0				
.500(6)(b) Water Environment (n/a for uplands)	Surrounding land uses and anthropogenic disturbance around the AA have likely altered natural wetland hydrology within the AA resulting in lower water levels and dryer conditions. Proposed impacts to the AA include excavation and fill associated with flowway construction.				
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">3</td> <td align="center">0</td> </tr> </table>	w/o pres or current	with	3	0	
w/o pres or current	with				
3	0				
.500(6)(c) Community structure	AA consists of altered vegetaton community with a high fraction (51-75%) of exotic/invasive species. Canopy species include bald cypress, slash pine, cabbage palm, melaleuca, and earleaf acacia. Common groundcover species include swamp fern and Ceasarweed. Proposed Impacts to the AA include excavation and fill associated with flowway construction.				
<p><b>1. Vegetation and/or</b> <b>2. Benthic Community</b></p> <table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">3</td> <td align="center">0</td> </tr> </table>	w/o pres or current	with	3	0	
w/o pres or current	with				
3	0				

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.333	0.000

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

For impact assessment areas
FL = delta x acres = -1.92

Delta = [with-current]
-0.333

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

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

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

Site/Project Name Collier County CWIP		Application Number SFWMD: 200214-2805		Assessment Area Name or Number Impact 4 - 7	
FLUCCs code 624-E1		Further classification (optional) Cypress-Pine-Cabbage Palm (<25% exotics)		Impact or Mitigation Site? Impact - Direct	Assessment Area Size 10.939
Basin/Watershed Name/Number Rookery Bay	Affected Waterbody (Class) III		Special Classification (i.e. OFW, AP, other local/state/federal designation) None		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands					
Assessment area (AA) hydrology and larger surrounding wetlands of the Picayune Strand State Forest have been altered (reduced hydroperiod and wet season water elevations due to regional stormwater drainage, interstate roadway infrastructure, and development of the Naples, Florida area).					
Assessment area description					
AA consists of a cypress-pine-cabbage palm wetland community with relatively low (<25%) exotic/invasive species cover. Canopy cover consists of a mix of bald cypress ( <i>Taxodium distichum</i> ), scattered slash pine ( <i>Pinus elliotii</i> ), cabbage palm ( <i>Sabal palmetto</i> ), and melaleuca ( <i>Melaleuca quinquenervia</i> ). Swamp fern ( <i>Blechnum serrulatum</i> ) commonly occupies the groundcover. Exotic species cover is low and consists of melaleuca, Ceasarweed ( <i>Urena lobata</i> ), shrubby false buttonweed ( <i>Spermacoce verticillata</i> ), and torpedo grass ( <i>Panicum repens</i> ). Intense wildfire in the past decade has caused damage to the old growth forest canopy in the AA and vicinity.					
Significant nearby features I-75 to the north			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique to region		
Functions Provides cover, substrate, and refuge; breeding; foraging; water storage; water quality improvement; groundwater recharge; wildlife habitat			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 be found)  Birds ( green heron, red-bellied woodpecker, red shouldered hawk, herons); snakes (banded and green watersnakes, cottonmouth, mud, black racer); turtles (musk, red-bellied cooter, mud); frogs (leopard, pig, bull, green tree); mammals (feral hog, opossum, armadillo, raccoon, white-tailed deer, squirrels, Florida panther)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Florida panther (state - E, fed - E); red cockaded woodpecker (state - E, federal - E); Big Cypress fox squirrel (state - T); Florida bonneted bat (state - E, federal - E)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):					
Additional relevant factors:					
Assessment conducted by: Taylor Engineering, Inc.			Assessment date(s): May 2020		

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

Site/Project Name Collier County CWIP	Application Number SFWMD: 200214-2805	Assessment Area Name or Number Impact 4 - 7
Impact or Mitigation Impact - Direct	Assessment conducted by: Taylor Engineering, Inc.	Assessment date: May 2020

<b>Scoring Guidance</b> 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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<b>Optimal (10)</b>	<b>Moderate(7)</b>	<b>Minimal (4)</b>	<b>Not Present (0)</b>
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: 7      with: 0</p>	<p>Availability of habitat outside of assessment area is good. I-75 and adjacent ditches border the AA to the north followed by undeveloped land. Large expanses of undeveloped land borders the AA to the east, west, and south. Vegetation communities in close proximity to the AA contain a relatively low fraction of exotic/invasive species. I-75 to the north does affect wildlife access to and utilization of the AA; however, opportunities for wildlife access and movement is good overall.</p>
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>w/o pres or current: 5      with: 0</p>	<p>For decades, AA hydroperiod, wet season average water levels, and dry season water table elevations in the surrounding state forest have been negatively impacted by stormwater drainage and infrastructure of regional development, creating possible wetland vegetation shifts and higher risk of wildfire frequency and intensity. Proposed impacts to the AA include excavation and fill associated with flowway construction.</p>
<p>.500(6)(c)Community structure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current: 7      with: 0</p>	<p>AA consists of a forested wetland community with a relatively low fraction (&lt;25% cover) of exotic/invasive species. Canopy species include bald cypress, slash pine, cabbage palm, and melaleuca. Common groundcover species include swamp fern. Exotic/invasive cover within the groundcover stratum includes species such as Ceasarweed, shrubby false buttonwood, and torpedo grass. Overall, the structure of the vegetation community within the AA is good; however, Intense wildfire in the past decade has caused damage to the old growth forest canopy in the AA and vicinity. Proposed impacts to the AA include excavation and fill associated with flowway construction.</p>

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres: 0.633      with: 0.000

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

For impact assessment areas
FL = delta x acres = -6.93

Delta = [with-current]
-0.633

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

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



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

Site/Project Name Collier County CWIP		Application Number SFWMD: 200214-2805		Assessment Area Name or Number Impact 8 - 9	
FLUCCs code 624-E2		Further classification (optional) Cypress-Pine-Cabbage Palm (25-50% exotics)		Impact or Mitigation Site? Impact - Direct	
Assessment Area Size 4.585		Basin/Watershed Name/Number Rookery Bay		Affected Waterbody (Class) III	
				Special Classification (i.e. OFW, AP, other local/state/federal designation of im) None	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands					
Assessment area (AA) hydrology and larger surrounding wetlands of the Picayune Strand State Forest have been altered (reduced hydroperiod and wet season water elevations due to regional stormwater drainage, interstate roadway infrastructure, and development of the Naples, Florida area).					
Assessment area description					
AA consists of a cypress-pine-cabbage palm wetland community with moderate (25-50%) exotic/invasive species cover. Canopy cover consists of a mix of small bald cypress ( <i>Taxodium distichum</i> ), scattered slash pine ( <i>Pinus elliotii</i> ), cabbage palm ( <i>Sabal palmetto</i> ), and melaleuca ( <i>Melaleuca quinquenervia</i> ). Swamp fern ( <i>Blechnum serrulatum</i> ) commonly occupies the groundcover. Exotic species cover is moderate and consists of melaleuca, Ceasarweed ( <i>Urena lobata</i> ), shrubby false buttonweed ( <i>Spermacoce verticillata</i> ), and torpedo grass ( <i>Panicum repens</i> ) occasionally occur. Intense wildfire in the past decade has caused damage to the old growth forest canopy in the AA and vicinity.					
Significant nearby features			Uniqueness (considering the relative rarity in relation to the regional landscape.)		
I-75 to the north			Not unique to region		
Functions			Mitigation for previous permit/other historic use		
Provides cover, substrate, and refuge; breeding; foraging; water storage; water quality improvement; groundwater recharge; wildlife habitat			None		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)		
Birds ( green heron, red-bellied woodpecker, red shouldered hawk, herons); snakes (banded and green watersnakes, cottonmouth, mud, black racer); turtles (musk, red-bellied cooter, mud); frogs (leopard, pig, bull, green tree); mammals (feral hog, opossum, armadillo, raccoon, white-tailed deer, squirrels, Florida panther)			Florida panther (state - E, fed - E); red cockaded woodpecker (state - E, federal - E); Big Cypress fox squirrel (state - T); Florida bonneted bat (state - E, federal - E)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):					
Additional relevant factors:					
Assessment conducted by:			Assessment date(s):		
Taylor Engineering, Inc.			May 2020		

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

Site/Project Name Collier County CWIP	Application Number SFWMD: 200214-2805	Assessment Area Name or Number Impact 8 - 9
Impact or Mitigation Impact - Direct	Assessment conducted by: Taylor Engineering, Inc.	Assessment date: May 2020

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

<b>Optimal (10)</b>	<b>Moderate(7)</b>	<b>Minimal (4)</b>	<b>Not Present (0)</b>
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> <table border="1"> <tr> <td>7</td> <td>0</td> </tr> </table>	7	0	<p>Availability of habitat outside of assessment area is good. I-75 and adjacent ditches lie approximately 0.75 mile north of the AA followed by undeveloped land. Large expanses of undeveloped land borders the AA to the east, west, and south. Vegetation communities in close proximity to the AA contain a moderate fraction of exotic/invasive species. I-75 to the north likely affects wildlife access to and utilization of the AA; however, opportunities for wildlife access and movement is good overall.</p>
7	0		
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>w/o pres or current      with</p> <table border="1"> <tr> <td>5</td> <td>0</td> </tr> </table>	5	0	<p>For decades, AA hydroperiod, wet season average water levels, and dry season water table elevations in the surrounding state forest have been negatively impacted by stormwater drainage and infrastructure of regional development, creating possible wetland vegetation shifts and higher risk of wildfire frequency and intensity. Proposed impacts to the AA include excavation and fill associated with flowway construction.</p>
5	0		
<p>.500(6)(c)Community structure</p> <p><b>1. Vegetation and/or</b> <b>2. Benthic Community</b></p> <p>w/o pres or current      with</p> <table border="1"> <tr> <td>6</td> <td>0</td> </tr> </table>	6	0	<p>AA consists of a forested wetland community with a moderate fraction (25-50% cover) of exotic/invasive species. Canopy species include bald cypress, slash pine, cabbage palm, and melaleuca. Common groundcover species include swamp fern. Exotic/invasive cover within the groundcover stratum includes species such as Ceasarweed, shrubby false buttonwood, and torpedo grass. Overall, the structure of the vegetation community within the AA is fair. Intense wildfire in the past decade has caused damage to the old growth forest canopy in the AA and vicinity. Proposed impacts to the AA include excavation and fill associated with flowway construction.</p>
6	0		

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

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

For impact assessment areas
FL = delta x acres = -2.75

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 Rule 62-345.400, F.A.C.)**

Site/Project Name Collier County CWIP		Application Number SFWMD: 200214-2805		Assessment Area Name or Number Impact 10 - 11	
FLUCCs code 624-E3		Further classification (optional) Cypress-Pine-Cabbage Palm (51-75% exotics)		Impact or Mitigation Site? Impact - Direct	Assessment Area Size 0.953
Basin/Watershed Name/Number Rookery Bay	Affected Waterbody (Class) III		Special Classification (i.e. OFW, AP, other local/state/federal designation of im None		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  Assessment area hydrology and larger surrounding wetlands of the Picayune Strand State Forest have been altered (reduced hydroperiod and wet season water elevations due to regional stormwater drainage, interstate roadway infrastructure, and development of the Naples, Florida area).					
Assessment area description AA consists of a cypress-pine-cabbage palm wetland community with moderately high (51-75%) exotic/invasive species cover. Canopy cover consists of a mix of small bald cypress ( <i>Taxodium distichum</i> ), scattered slash pine ( <i>Pinus elliotii</i> ), cabbage palm ( <i>Sabal palmetto</i> ), and melaleuca ( <i>Melaleuca quinquenervia</i> ). Swamp fern ( <i>Blechnum serrulatum</i> ) commonly occupies the groundcover. Exotic species cover is moderately high and consists of melaleuca, Ceasarweed ( <i>Urena lobata</i> ), shrubby false buttonweed ( <i>Spermacoce verticillata</i> ), and torpedo grass ( <i>Panicum repens</i> ) occasionally occur. Intense wildfire in the past decade has caused damage to the old growth forest canopy in the AA and vicinity.					
Significant nearby features  I-75 to the north			Uniqueness (considering the relative rarity in relation to the regional landscape.)  Not unique to region		
Functions  Provides cover, substrate, and refuge; breeding; foraging; water storage; water quality improvement; groundwater recharge; wildlife habitat			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 be found)  Birds ( green heron, red-bellied woodpecker, red shouldered hawk, herons); snakes (banded and green watersnakes, cottonmouth, mud, black racer); turtles (musk, red-bellied cooter, mud); frogs (leopard, pig, bull, green tree); mammals (feral hog, opossum, armadillo, raccoon, white-tailed deer, squirrels, Florida panther)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Florida panther (state - E, fed - E); red cockaded woodpecker (state - E, federal - E); Big Cypress fox squirrel (state - T); Florida bonneted bat (state - E, federal - E)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  					
Additional relevant factors:  					
Assessment conducted by: Taylor Engineering, Inc.			Assessment date(s): May 2020		

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

Site/Project Name Collier County CWIP	Application Number SFWMD: 200214-2805	Assessment Area Name or Number Impact 10 - 11
Impact or Mitigation Impact - Direct	Assessment conducted by: Taylor Engineering, Inc.	Assessment date: May 2020

<b>Scoring Guidance</b> 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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<b>Optimal (10)</b>	<b>Moderate(7)</b>	<b>Minimal (4)</b>	<b>Not Present (0)</b>
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: 7      with: 0</p>	<p>Availability of habitat outside of assessment area is good. I-75 and adjacent ditches lie approximately 0.80 mile north of the AA followed by undeveloped land. Large expanses of undeveloped land borders the AA to the east, west, and south. Vegetation communities in close proximity to the AA contain a moderate fraction of exotic/invasive species. I-75 to the north likely affects wildlife access to and utilization of the AA; however, opportunities for wildlife access and movement is good overall.</p>
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>w/o pres or current: 5      with: 0</p>	<p>For decades, AA hydroperiod, wet season average water levels, and dry season water table elevations in the surrounding state forest have been negatively impacted by stormwater drainage and infrastructure of regional development, creating possible wetland vegetation shifts and higher risk of wildfire frequency and intensity. Proposed impacts to the AA include excavation and fill associated with flowway construction.</p>
<p>.500(6)(c)Community structure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current: 4      with: 0</p>	<p>AA consists of a forested wetland community with a moderately high fraction (51-75% cover) of exotic/invasive species. Canopy species include bald cypress, slash pine, cabbage palm, and melaleuca. Common groundcover species include swamp fern. Exotic/invasive cover within the groundcover stratum includes species such as Ceasarweed, shrubby false buttonwood, and torpedo grass. Overall, the structure of the vegetation community within the AA is fair to poor. Intense wildfire in the past decade has caused damage to the old growth forest canopy in the AA and vicinity. Proposed impacts to the AA include excavation and fill associated with flowway construction.</p>

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres: 0.533      with: 0.000

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

For impact assessment areas
FL = delta x acres = -0.51

Delta = [with-current]
-0.533

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

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

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

Site/Project Name Collier County CWIP		Application Number SFWMD: 200214-2805		Assessment Area Name or Number Impact 12	
FLUCCs code 619		Further classification (optional) Exotic Wetland Hardwoods		Impact or Mitigation Site? Impact - Direct	
Assessment Area Size 0.511					
Basin/Watershed Name/Number Rookery Bay		Affected Waterbody (Class) III		Special Classification (i.e. OFW, AP, other local/state/federal designation) None	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  Assessment area (AA) hydrology has been altered by clearing and drainging activity on immediately adjacent private properties. The larger surrounding wetlands of the Picayune Strand State Forest have been altered (reduced hydroperiod and wet season water elevations due to regional stormwater drainage, interstate roadway infrastructure, and development of the Naples, Florida area).					
Assessment area description  The AA lies along the north boundary of the Sanders Blvd residential property and consists of an exotic wetland hardwoods community composed of a near monoculture of melaleuca ( <i>Melaleuca quinquenervia</i> ) with occassional slash pine ( <i>Pinus elliottii</i> ) and cabbage palm ( <i>Sabal palmetto</i> ).					
Significant nearby features Residential property (Saunders Blvd property) to the south, large borrow pit to the southeast, I-75 3.4 miles to the north			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique to region		
Functions Provides cover, substrate, and refuge; breeding; foraging; water storage; water quality improvement; groundwater recharge; wildlife habitat			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 be found)  Birds ( green heron, red-bellied woodpecker, red shouldered hawk, herons); snakes (banded and green watersnakes, cottonmouth, mud, black racer); turtles (musk, red-bellied cooter, mud); frogs (leopard, pig, bull, green tree); mammals (feral hog, opossum, armadillo, raccoon, white-tailed deer)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Florida panther (state - E, fed - E); Big Cypress fox squirrel (state - T); Florida bonneted bat (state - E, federal - E)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):					
Additional relevant factors:					
Assessment conducted by: Taylor Engineering, Inc.			Assessment date(s): May 2020		

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

Site/Project Name Collier County CWIP	Application Number SFWMD: 200214-2805	Assessment Area Name or Number Impact 12
Impact or Mitigation Impact - Direct	Assessment conducted by: Taylor Engineering, Inc.	Assessment date: May 2020

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

<b>Optimal (10)</b>	<b>Moderate(7)</b>	<b>Minimal (4)</b>	<b>Not Present (0)</b>
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</p> <table border="1"> <tr> <td>6</td> <td>with</td> </tr> <tr> <td></td> <td>0</td> </tr> </table>	6	with		0	<p>Availability of habitat outside of assessment area is good. A residential property borders the AA to the south and there is a large borrow pit southeast of the residential property. The AA, residential property, and borrow pit lie within a relatively large expanse of undeveloped land. High density residential and agricultural land uses occur 2.4 miles to the west and 2.7 miles to the south, respectively. Vegetation communities in close proximity to the AA contain a moderate to high fraction of exotic/invasive species. Disturbance and noise from the adjacent property likely affect wildlife access to and utilization of the AA. However, location and landscape support provided by the habitat surrounding the AA in generally good.</p>
6	with				
	0				
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>w/o pres or current</p> <table border="1"> <tr> <td>3</td> <td>with</td> </tr> <tr> <td></td> <td>0</td> </tr> </table>	3	with		0	<p>Immediately adjacent drainage and clearing of private property within the last decade have impacted the water environment in the immediate area. For decades, AA hydroperiod, wet season average water levels, and dry season water table elevations in the surrounding state forest have been negatively impacted by stormwater drainage and infrastructure of regional development, creating possible wetland vegetation shifts and higher risk of wildfire frequency and intensity. Proposed impacts to the AA include fill associated with berm construction around the Sanders Blvd residential property.</p>
3	with				
	0				
<p>.500(6)(c)Community structure</p> <p>1. <b>Vegetation and/or</b> 2. <b>Benthic Community</b></p> <p>w/o pres or current</p> <table border="1"> <tr> <td>2</td> <td>with</td> </tr> <tr> <td></td> <td>0</td> </tr> </table>	2	with		0	<p>The AA consists of an exotic wetland hardwoods community composed of a near monoculture of melaleuca (<i>Melaleuca quinquenervia</i>), an exotic, highly invasive species. Other canopy species within the AA include slash pine (<i>Pinus elliotii</i>) and cabbage palm (<i>Sabal palmetto</i>). Proposed impacts to the AA include fill associated with berm construction around the Sanders Blvd residential property.</p>
2	with				
	0				

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.367	0.000

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

For impact assessment areas
FL = delta x acres = -0.19

Delta = [with-current]
-0.367

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

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

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

Site/Project Name Collier County CWIP		Application Number SFWMD: 200214-2805		Assessment Area Name or Number Impact 13	
FLUCCs code 500		Further classification (optional) Water		Impact or Mitigation Site? Impact - Direct	
Assessment Area Size 0.043					
Basin/Watershed Name/Number Rookery Bay		Affected Waterbody (Class) III		Special Classification (i.e. OFW, AP, other local/state/federal designation of im) None	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Assessment area (AA) hydrology has been altered by clearing and drainging activity on immediately adjacent private properties. The larger surrounding wetlands of the Picayune Strand State Forest have been altered (reduced hydroperiod and wet season water elevations due to regional stormwater drainage, interstate roadway infrastructure, and development of the Naples, Florida area).</p>					
<p>Assessment area description</p> <p>The AA consists of a small manmade area of standing, open water in the northwest corner of the Sanders Blvd property. No vegetation community present</p>					
Significant nearby features Residential property (Saunders Blvd property) to the south, large borrow pit to the southeast, I-75 3.4 miles to the north			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique to region		
Functions Provides breeding; foraging; water storage; water quality improvement; groundwater recharge; wildlife habitat			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 be found)  Birds ( herons, egrets, wading birds); snakes (banded and green watersnakes, cottonmouth, mud, black racer); turtles (musk, red-bellied cooter, mud); frogs (leopard, pig, bull, green tree); mammals (feral hog, opossum, armadillo, raccoon, white-tailed deer)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Florida panther (state - E, fed - E); Big Cypress fox squirrel (state - T);		
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: Taylor Engineering, Inc.			Assessment date(s): May 2020		

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

Site/Project Name Collier County CWIP	Application Number SFWMD: 200214-2805	Assessment Area Name or Number Impact 13
Impact or Mitigation Impact - Direct	Assessment conducted by: Taylor Engineering, Inc.	Assessment date: May 2020

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

<b>Optimal (10)</b>	<b>Moderate(7)</b>	<b>Minimal (4)</b>	<b>Not Present (0)</b>
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	Availability of habitat outside of assessment area is good. A residential property borders the AA to the southeast and there is a large borrow pit southeast of the residential property. The AA, residential property, and borrow pit lie within a relatively large expanse of undeveloped land. High density residential and agricultural land uses occur 2.4 miles to the west and 2.7 miles to the south, respectively. Vegetation communities in close proximity to the AA contain a moderate to high fraction of exotic/invasive species. Disturbance and noise from the adjacent property likely affect wildlife access to and utilization of the AA. However, location and landscape support provided by the habitat surrounding the AA in generally good.				
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>6</td> <td>0</td> </tr> </table>	w/o pres or current	with	6	0	
w/o pres or current	with				
6	0				
.500(6)(b)Water Environment (n/a for uplands)	The AA consists of an artificially-created surface water in a drained environment. Proposed impacts to the AA include fill associated with berm construction around the Sanders Blvd residential property.				
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>3</td> <td>0</td> </tr> </table>	w/o pres or current	with	3	0	
w/o pres or current	with				
3	0				
.500(6)(c)Community structure	Altered, artificially-created feature. No vegetation community present. Provides marginal habitat for water dependent species. Proposed impacts to the AA include fill associated with berm construction around the Sanders Blvd residential property.				
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>2</td> <td>0</td> </tr> </table>	w/o pres or current	with	2	0	
w/o pres or current	with				
2	0				

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.367	0.000

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

For impact assessment areas
FL = delta x acres = -0.02

Delta = [with-current]
-0.367

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

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



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

Site/Project Name Collier County CWIP		Application Number SFWMD: 200214-2805		Assessment Area Name or Number Impact 14	
FLUCCs code 625-E4		Further classification (optional) Wet Pinelands Hydric Pine (>75% exotics)		Impact or Mitigation Site? Impact - Direct	
Assessment Area Size 0.916					
Basin/Watershed Name/Number Rookery Bay		Affected Waterbody (Class) III		Special Classification (i.e. OFW, AP, other local/state/federal designation of im) None	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Assessment area (AA) hydrology has been altered by clearing and drainging activity on immediately adjacent private properties. The larger surrounding wetlands of the Picayune Strand State Forest have been altered (reduced hydroperiod and wet season water elevations due to regional stormwater drainage, interstate roadway infrastructure, and development of the Naples, Florida area).</p>					
<p>Assessment area description</p> <p>The AA lies along the west and and portion of the south boundary of the Saunders Blvd residential property and consists of hydric pine flatwoods community heavily infested (&gt;75% cover) with exotic species. Canopy species consist of melaleuca (<i>Melaleuca quinquenervia</i>) with occassional slash pine (<i>Pinus elliotii</i>) and cabbage palm (<i>Sabal palmetto</i>).</p>					
Significant nearby features Residential property (Saunders Blvd property) to the south, large borrow pit to the southeast, I-75 3.4 miles to the north			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique to landscape		
Functions Provides cover, substrate, and refuge; breeding; foraging; water storage; water quality improvement; groundwater recharge; wildlife habitat			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 be found)  Birds ( green heron, red-bellied woodpecker, red shouldered hawk, herons); snakes (banded and green watersnakes, cottonmouth, mud, black racer); turtles (musk, red-bellied cooter, mud); frogs (leopard, pig, bull, green tree); mammals (feral hog, opossum, armadillo, raccoon, white-tailed deer)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Florida panther (state - E, fed - E); red cockaded woodpecker (state - E, federal - E); Big Cypress fox squirrel (state - T); Florida bonneted bat (state - E, federal - E)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):					
Additional relevant factors:					
Assessment conducted by: Taylor Engineering, Inc.			Assessment date(s): May 2020		

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

Site/Project Name Collier County CWIP	Application Number SFWMD: 200214-2805	Assessment Area Name or Number Impact 14
Impact or Mitigation Impact - Direct	Assessment conducted by: Taylor Engineering, Inc.	Assessment date: May 2020

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

<b>Optimal (10)</b>	<b>Moderate(7)</b>	<b>Minimal (4)</b>	<b>Not Present (0)</b>
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	Availability of habitat outside of assessment area is good. A residential property borders the AA to the east and there is a large borrow pit southeast of the residential property. The AA, residential property, and borrow pit lie within a relatively large expanse of undeveloped land. High density residential and agricultural land uses occur 2.4 miles to the west and 2.7 miles to the south, respectively. Vegetation communities in close proximity to the AA contain a moderate to high fraction of exotic/invasive species. Disturbance and noise from the adjacent property likely affect wildlife access to and utilization of the AA. However, location and landscape support provided by the habitat surrounding the AA in generally good.				
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">6</td> <td align="center">0</td> </tr> </table>	w/o pres or current	with	6	0	
w/o pres or current	with				
6	0				
.500(6)(b)Water Environment (n/a for uplands)	Immediately adjacent drainage and clearing of private property within the last decade have impacted the water environment in the immediate area. For decades, AA hydroperiod, wet season average water levels, and dry season water table elevations in the surrounding state forest have been negatively impacted by stormwater drainage and infrastructure of regional development, creating possible wetland vegetation shifts and higher risk of wildfire frequency and intensity. Impacts to the AA include excavation and fill associated with flowway construction. Proposed impacts to the AA include fill associated with berm construction around the Sanders Blvd residential property.				
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">3</td> <td align="center">0</td> </tr> </table>	w/o pres or current	with	3	0	
w/o pres or current	with				
3	0				
.500(6)(c)Community structure	Disturbed community. AA consists of hydric pine flatwoods community heavily infested (>75% cover) with exotic species. Canopy species consist of melaleuca ( <i>Melaleuca quinquenervia</i> ) with occasional slash pine ( <i>Pinus elliotii</i> ) and cabbage palm ( <i>Sabal palmetto</i> ). Proposed impacts to the AA include fill associated with berm construction around the Sanders Blvd residential property.				
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">2</td> <td align="center">0</td> </tr> </table>	w/o pres or current	with	2	0	
w/o pres or current	with				
2	0				

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.367	0.000

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

For impact assessment areas
FL = delta x acres = -0.34

Delta = [with-current]
-0.367

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

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

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

Site/Project Name Collier County CWIP		Application Number SFWMD: 200214-2805		Assessment Area Name or Number Impact 15	
FLUCCs code 624-E4		Further classification (optional) Cypress-Pine-Cabbage Palm (>75% exotics)		Impact or Mitigation Site? Impact - Direct	
Assessment Area Size 1.071					
Basin/Watershed Name/Number Rookery Bay		Affected Waterbody (Class) III		Special Classification (i.e. OFW, AP, other local/state/federal designation of im) None	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands					
Assessment area (AA) hydrology has been altered by clearing and drainage activity on immediately adjacent private properties. The larger surrounding wetlands of the Picayune Strand State Forest have been altered (reduced hydroperiod and wet season water elevations due to regional stormwater drainage, interstate roadway infrastructure, and development of the Naples, Florida area).					
Assessment area description AA consists of a cypress-pine-cabbage palm wetland community with high (>75%) exotic/invasive species cover. Canopy species consist of a mix of melaleuca ( <i>Melaleuca quinquenervia</i> ), bald cypress ( <i>Taxodium distichum</i> ), slash pine ( <i>Pinus elliotii</i> ), cabbage palm ( <i>Sabal palmetto</i> ). Common groundcover species include swamp fern ( <i>Blechnum serrulatum</i> ) and Ceasarweed ( <i>Urena lobata</i> ). Exotic species include melaleuca, Brazilian pepper ( <i>Schinus terebinthifolius</i> ), Ceaserweed, and paragrass ( <i>Urochloa mutica</i> ).					
Significant nearby features Residential property (Saunders Blvd property) to the south, large borrow pit to the southeast, I-75 3.4 miles to the north			Uniqueness (considering the relative rarity in relation to the regional landscape.)		
Functions Provides cover, substrate, and refuge; breeding; foraging; water storage; water quality improvement; groundwater recharge; 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 be found)  Birds ( green heron, red-bellied woodpecker, red shouldered hawk, herons); snakes (banded and green watersnakes, cottonmouth, mud, black racer); turtles (musk, red-bellied cooter, mud); frogs (leopard, pig, bull, green tree); mammals (feral hog, opossum, armadillo, raccoon, white-tailed deer)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Florida panther (state - E, fed - E); red cockaded woodpecker (state - E, federal - E); Big Cypress fox squirrel (state - T); Florida bonneted bat (state - E, federal - E)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):					
Additional relevant factors:					
Assessment conducted by: Taylor Engineering, Inc.			Assessment date(s): May 2020		

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

Site/Project Name Collier County CWIP	Application Number SFWMD: 200214-2805	Assessment Area Name or Number Impact 15
Impact or Mitigation Impact - Direct	Assessment conducted by: Taylor Engineering, Inc.	Assessment date: May 2020

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

<b>Optimal (10)</b>	<b>Moderate(7)</b>	<b>Minimal (4)</b>	<b>Not Present (0)</b>
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	Availability of habitat outside of assessment area is good. A residential property borders the AA to the north and there is a large borrow pit southeast of the AA. The AA, residential property, and borrow pit lie within a relatively large expanse of undeveloped land. High density residential and agricultural land uses occur 2.4 miles to the west and 2.7 miles to the south, respectively. Vegetation communities in close proximity to the AA contain a moderate to high fraction of exotic/invasive species. Disturbance and noise from the adjacent property likely affect wildlife access to and utilization of the AA. However, location and landscape support provided by the habitat surrounding the AA in generally good.	
	w/o pres or current 6	with 0
.500(6)(b)Water Environment (n/a for uplands)	Immediately adjacent drainage and clearing of private property within the last decade have impacted the water environment in the immediate area. For decades, AA hydroperiod, wet season average water levels, and dry season water table elevations in the surrounding state forest have been negatively impacted by stormwater drainage and infrastructure of regional development, creating possible wetland vegetation shifts and higher risk of wildfire frequency and intensity. Impacts to the AA include excavation and fill associated with flowway construction. Proposed impacts to the AA include fill associated with berm construction around the Sanders Blvd residential property.	
	w/o pres or current 3	with 0
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community	AA consists of a cypress-pine-cabbage palm wetland community with high (>75%) exotic/invasive species cover. Canopy species consist of a mix of melaleuca ( <i>Melaleuca quinquenervia</i> ), bald cypress ( <i>Taxodium distichum</i> ), slash pine ( <i>Pinus elliotii</i> ), cabbage palm ( <i>Sabal palmetto</i> ). Common groundcover species include swamp fern ( <i>Blechnum serrulatum</i> ) and Ceasarweed ( <i>Urena lobata</i> ). Exotic species include melaleuca, Brazilian pepper ( <i>Schinus terebinthifolius</i> ), Ceaserweed, and paragrass ( <i>Urochloa mutica</i> ). Proposed impacts to the AA include fill associated with berm construction around the Sanders Blvd residential property.	
	w/o pres or current 2	with 0

Score = sum of above scores/30 (if uplands, divide by 20)	
current	with
or w/o pres	
0.367	0.000

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

For impact assessment areas
FL = delta x acres = -0.39

Delta = [with-current]
-0.367

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

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

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

Site/Project Name Collier County CWIP		Application Number SFWMD: 200214-2805		Assessment Area Name or Number Impact 16, 17, 19, 23	
FLUCCs code 510		Further classification (optional) Streams and Waterways		Impact or Mitigation Site? Impact - Direct	Assessment Area Size 7.552
Basin/Watershed Name/Number Rookery Bay	Affected Waterbody (Class) III		Special Classification (i.e. OFW, AP, other local/state/federal designation of im None		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  Assessment area (AA) hydrology and larger surrounding wetlands have been altered (reduced hydroperiod and wet season water elevations due to regional stormwater drainage, interstate and local roadway infrastructure, and development of the Naples, Florida area). The AA occurs at the borders of newly constructed residential neighborhoods and neighborhoods currently under construction.					
Assessment area description  The AA consists of surface water drainage ditches bordering residential developments. Portions of the ditches contain vegetation such as common reed ( <i>Phragmites berlandieri</i> ), Carolina willow ( <i>Salix caroliniana</i> ), bald cypress ( <i>Taxodium distichum</i> ), cattail ( <i>Typha</i> sp.), broomsedge ( <i>Andropogon</i> spp.), maidencane ( <i>Panicum hemitomon</i> ), alligator flag ( <i>Thalia geniculata</i> ), and pickerelweed ( <i>Pontederia cordata</i> ). Exotic species occurring within the AA include Brazilian pepper ( <i>Schinus terebinthifolius</i> ), torpedo grass ( <i>Panicum repens</i> ), melaleuca ( <i>Melaleuca quinquenervia</i> ), earleaf acacia ( <i>Acacia quicculiformis</i> ), shrubby false buttonweed ( <i>Spermacoce verticillata</i> ), and Ceaserweed ( <i>Urena lobata</i> ).					
Significant nearby features  US 41 to the south, agricultural lands to the east, undeveloped lands to the north			Uniqueness (considering the relative rarity in relation to the regional landscape.)  Not unique to the region		
Functions  Provides cover, substrate, and refuge; breeding; foraging; water storage; water quality improvement; groundwater recharge; wildlife habitat			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 be found)  Birds ( herons, egrets, wading birds, red-winged blackbird); snakes (banded and green watersnakes, cottonmouth, mud, black racer); turtles (musk, red-bellied cooter, mud); frogs (leopard, pig, bull, green tree); mammals (feral hog, opossum, armadillo, raccoon, white-tailed deer)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Florida panther (state - E, fed - E); Big Cypress fox squirrel (state - T); Florida bonneted bat (state - E, federal - E)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  					
Additional relevant factors:  					
Assessment conducted by: Taylor Engineering, Inc.			Assessment date(s): May 2020		

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

Site/Project Name Collier County CWIP	Application Number SFWMD: 200214-2805	Assessment Area Name or Number Impact 16, 17, 19, 23
Impact or Mitigation Impact - Direct	Assessment conducted by: Taylor Engineering, Inc.	Assessment date: May 2020

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

<b>Optimal (10)</b>	<b>Moderate(7)</b>	<b>Minimal (4)</b>	<b>Not Present (0)</b>
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	Availability of habitats outside the AA is poor to fair. Residential development and agricultural land uses border the AA. Undeveloped land occurs north of the AA. Vegetation communities in close proximity to the AA contain varying amounts of exotic/invasive species. Land uses outside of the AA (residential, agriculture, roads, ditches) adversely affect wildlife access to and utilization of the AA.				
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">4</td> <td align="center">0</td> </tr> </table>	w/o pres or current	with	4	0	
w/o pres or current	with				
4	0				
.500(6)(b)Water Environment (n/a for uplands)	Water environment typical of artificially-created drainage ditch. Immediately adjacent drainage and clearing of private property for development including stormwater management have impacted the water environment in the immediate area. The AA hydroperiod, wet season average water levels, and dry season water table elevations in the adjacent wetland forest has been negatively impacted by stormwater drainage and infrastructure of regional development. Proposed impacts to the AA include excavation and fill associated with flowway construction.				
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">3</td> <td align="center">0</td> </tr> </table>	w/o pres or current	with	3	0	
w/o pres or current	with				
3	0				
.500(6)(c)Community structure	The AA consists of surface water drainage ditches bordering residential developments. Portions of the ditches contain vegetation such as common reed ( <i>Phragmites berlandieri</i> ), Carolina willow ( <i>Salix caroliniana</i> ), bald cypress ( <i>Taxodium distichum</i> ), cattail ( <i>Typha</i> sp.), broomsedge ( <i>Andropogon</i> spp.), maidencane ( <i>Panicum hemitomon</i> ), alligator flag ( <i>Thalia geniculata</i> ), and pickerelweed ( <i>Pontederia cordata</i> ). Exotic species occurring within the AA include Brazilian pepper ( <i>Schinus terebinthifolius</i> ), torpedo grass ( <i>Panicum repens</i> ), melaleuca ( <i>Melaleuca quinquenervia</i> ), earleaf acacia ( <i>Acacia quicculiformis</i> ), shrubby false buttonweed ( <i>Spermacoce verticillata</i> ), and Ceaserweed ( <i>Urena lobata</i> ). Proposed impacts to the AA include excavation and fill associated with flowway construction.				
<b>1. Vegetation and/or</b> <b>2. Benthic Community</b>  <table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">3</td> <td align="center">0</td> </tr> </table>	w/o pres or current	with	3	0	
w/o pres or current	with				
3	0				

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.333	0.000

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

For impact assessment areas
FL = delta x acres = -2.52

Delta = [with-current]
-0.333

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

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

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

Site/Project Name Collier County CWIP		Application Number SFWMD: 200214-2805		Assessment Area Name or Number Impact 18	
FLUCCs code 624-E2		Further classification (optional) Cypress-Pine-Cabbage Palm (25-50% exotics)		Impact or Mitigation Site? Impact - Direct	
Assessment Area Size 1.882					
Basin/Watershed Name/Number Rookery Bay		Affected Waterbody (Class) III		Special Classification (i.e. OFW, AP, other local/state/federal designation of im) None	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands					
Assessment area (AA) hydrology and larger surrounding wetlands have been altered (reduced hydroperiod and wet season water elevations due to regional stormwater drainage, interstate and local roadway infrastructure, and development of the Naples, Florida area. The AA occurs at the western border of recently constructed residential neighborhoods and a main development access road. Hydrologically-altered wetlands lie to the east of the AA.					
Assessment area description The AA consists of a cypress-pine-cabbage palm forested wetland community with moderate (25-50%) exotic vegetation cover. Dominant canopy species include a mix of bald cypress ( <i>Taxodium distichum</i> ), slash pine ( <i>Pinus elliotii</i> ), cabbage palm ( <i>Sabal palmetto</i> ), dahoon holly ( <i>Ilex cassine</i> ), and laurel oak ( <i>Quercus laurifolia</i> ). Groundcover and shrub species include false nettle ( <i>Boehmeria cylindrica</i> ), myrsine ( <i>Myrsine cubana</i> ), and wax myrtle ( <i>Morella cerifera</i> ). Exotic species include Brazilian pepper ( <i>Schinus terebinthifolius</i> ), melaleuca ( <i>Melaleuca quinquenervia</i> ), Ceaserweed ( <i>Urena lobata</i> ), and shrubby false buttonweed ( <i>Spermacoce verticillata</i> ).					
Significant nearby features US 41 to the south, residential development to the north, south, and east, mostly undeveloped land to west			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique to region		
Functions Provides cover, substrate, and refuge; breeding; foraging; water storage; water quality improvement; groundwater recharge; wildlife habitat			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 be found)  Birds ( green heron, red-bellied woodpecker, red shouldered hawk, herons); snakes (banded and green watersnakes, cottonmouth, mud, black racer); turtles (musk, red-bellied cooter, mud); frogs (leopard, pig, bull, green tree); mammals (feral hog, opossum, armadillo, raccoon, white-tailed deer)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Florida panther (state - E, fed - E); Big Cypress fox squirrel (state - T); Florida bonneted bat (state - E, federal - E)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):					
Additional relevant factors:					
Assessment conducted by: Taylor Engineering, Inc.			Assessment date(s): May 2020		

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

Site/Project Name Collier County CWIP	Application Number SFWMD: 200214-2805	Assessment Area Name or Number Impact 18
Impact or Mitigation Impact - Direct	Assessment conducted by: Taylor Engineering, Inc.	Assessment date: May 2020

Scoring Guidance The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	<b>Optimal (10)</b>	<b>Moderate(7)</b>	<b>Minimal (4)</b>	<b>Not Present (0)</b>
	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 5 with 0	Availability of habitat outside the AA is fair. US 41 to the south and residential land uses to the north, south, and east likely hinder wildlife access to and from the AA. Undeveloped land west of the AA does provide opportunities for wildlife access and movement within the AA. Vegetation communities in close proximity to the AA contain moderate levels of exotic/invasive species cover.
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current 4 with	Immediately adjacent drainage and clearing of private property for development including stormwater management have impacted the water environment in the immediate area. Hydroperiod, wet season average water levels, and dry season water table elevations in the adjacent wetland forest have been negatively impacted by stormwater drainage and infrastructure of regional development. Proposed impacts to the AA include excavation and fill associated with flowway construction.
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current 6 with 0	The AA consists of a cypress-pine-cabbage palm forested wetland community with moderate (25-50%) exotic vegetation cover. Dominant canopy species include a mix of bald cypress ( <i>Taxodium distichum</i> ), slash pine ( <i>Pinus elliotii</i> ), cabbage palm ( <i>Sabal palmetto</i> ), dahoon holly ( <i>Ilex cassine</i> ), and laurel oak ( <i>Quercus laurifolia</i> ). Groundcover and shrub species include false nettle ( <i>Boehmeria cylindrica</i> ), myrsine ( <i>Myrsine cubana</i> ), and wax myrtle ( <i>Morella cerifera</i> ). Exotic species include Brazilian pepper ( <i>Schinus terebinthifolius</i> ), melaleuca ( <i>Melaleuca quinquenervia</i> ), Ceaserweed ( <i>Urena lobata</i> ), and shrubby false buttonweed ( <i>Spermacoce verticillata</i> ). Proposed impacts to the AA include excavation and fill associated with flowway construction.

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres 0.500	with 0.000

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

For impact assessment areas
FL = delta x acres = -0.94

Delta = [with-current]
-0.500

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

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



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

Site/Project Name Collier County CWIP		Application Number SFWMD: 200214-2805		Assessment Area Name or Number Impact 20 - 21	
FLUCCs code 624-E1		Further classification (optional) Cypress-Pine-Cabbage Palm (<25% exotics)		Impact or Mitigation Site? Impact - Direct	Assessment Area Size 0.452
Basin/Watershed Name/Number Rookery Bay	Affected Waterbody (Class) III		Special Classification (i.e. OFW, AP, other local/state/federal designation) None		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  Assessment area (AA) hydrology and larger surrounding wetlands have been altered (reduced hydroperiod and wet season water elevations due to regional stormwater drainage, interstate and local roadway infrastructure, and development of the Naples, Florida area). The AA occurs at the borders of an active, drained agricultural area.					
Assessment area description  AA consists of a cypress-pine-cabbage palm wetland community with relatively low (<25%) exotic/invasive species cover. Canopy cover consists of a mix of bald cypress ( <i>Taxodium distichum</i> ), slash pine ( <i>Pinus elliotii</i> ), cabbage palm ( <i>Sabal palmetto</i> ), and melaleuca ( <i>Melaleuca quinquenervia</i> ). Swamp fern ( <i>Blechnum serrulatum</i> ) commonly occupies the groundcover. Exotic species cover is low and consists of melaleuca, Ceasarweed ( <i>Urena lobata</i> ), shrubby false buttonweed ( <i>Spermacoce verticillata</i> ). Intense wildfire in the past decade has caused damage to the old growth forest canopy in the AA and vicinity.					
Significant nearby features Undeveloped land to the north, disturbed land and residential development to the south and west, agricultural lands to the east			Uniqueness (considering the relative rarity in relation to the regional landscape.) No unique to region		
Functions Provides cover, substrate, and refuge; breeding; foraging; water storage; water quality improvement; groundwater recharge; wildlife habitat			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 be found)  Birds ( green heron, red-bellied woodpecker, red shouldered hawk, herons); snakes (banded and green watersnakes, cottonmouth, mud, black racer); turtles (musk, red-bellied cooter, mud); frogs (leopard, pig, bull, green tree); mammals (feral hog, opossum, armadillo, raccoon, white-tailed deer)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Florida panther (state - E, fed - E); Big Cypress fox squirrel (state - T); Florida bonneted bat (state - E, federal - E)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):					
Additional relevant factors:					
Assessment conducted by: Taylor Engineering, Inc.			Assessment date(s): May 2020		

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

Site/Project Name Collier County CWIP	Application Number SFWMD: 200214-2805	Assessment Area Name or Number Impact 20 -21
Impact or Mitigation Impact - Direct	Assessment conducted by: Taylor Engineering, Inc.	Assessment date: May 2020

<b>Scoring Guidance</b> 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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<b>Optimal (10)</b>	<b>Moderate(7)</b>	<b>Minimal (4)</b>	<b>Not Present (0)</b>
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 5 with 0	Availability of habitat outside the AA is fair. Agricultural lands to the south and east and residential land uses to the west likely adversely affect wildlife access to/from and utilization of the AA. Large expanses of undeveloped land north of the AA does provide wildlife access and movement support to the AA. Vegetation communities in close proximity to the AA contain low to moderate levels of exotic/invasive species cover.
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current 4 with 0	Immediately adjacent drainage and clearing of private property for agricultural development including stormwater management have impacted the water environment in the immediate area. Hydroperiod, wet season average water levels, and dry season water table elevations in the adjacent wetland forest has been negatively impacted by stormwater drainage and infrastructure of regional development. Proposed impacts to the AA include excavation and fill associated with flowway construction.
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current 7 with 0	AA consists of a cypress-pine-cabbage palm wetland community with relatively low (<25%) exotic/invasive species cover. Canopy cover consists of a mix of bald cypress ( <i>Taxodium distichum</i> ), slash pine ( <i>Pinus elliotii</i> ), cabbage palm ( <i>Sabal palmetto</i> ), and melaleuca ( <i>Melaleuca quinquenervia</i> ). Swamp fern ( <i>Blechnum serrulatum</i> ) commonly occupies the groundcover. Exotic species cover is low and consists of melaleuca, Ceasarweed ( <i>Urena lobata</i> ), shrubby false buttonweed ( <i>Spermacoce verticillata</i> ). Intense wildfire in the past decade has caused damage to the old growth forest canopy in the AA and vicinity. Proposed impacts to the AA include excavation and fill associated with flowway construction.

Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.533 with 0.000
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If preservation as mitigation, Preservation adjustment factor = Adjusted mitigation delta =
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For impact assessment areas FL = delta x acres = -0.24
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Delta = [with-current] -0.533
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If mitigation Time lag (t-factor) = Risk factor =
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For mitigation assessment areas RFG = delta/(t-factor x risk) =
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**PART I – Qualitative Description  
(See Rule 62-345.400, F.A.C.)**

Site/Project Name Collier County CWIP		Application Number SFWMD: 200214-2805		Assessment Area Name or Number Impact 22	
FLUCCs code 621-E1		Further classification (optional) Cypress (<25% exotics)		Impact or Mitigation Site? Impact - Direct	Assessment Area Size 0.340
Basin/Watershed Name/Number Rookery Bay	Affected Waterbody (Class) III		Special Classification (i.e. OFW, AP, other local/state/federal designation) None		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  Assessment area (AA) hydrology and larger surrounding wetlands have been altered (reduced hydroperiod and wet season water elevations due to regional stormwater drainage, interstate and local roadway infrastructure, and development of the Naples, Florida area). The AA occurs at the borders of an active, drained agricultural area.					
Assessment area description  AA consists of a cypress-dominated wetland community with relatively low (<25%) exotic/invasive species cover. Canopy cover consists of bald cypress ( <i>Taxodium distichum</i> ). Swamp fern ( <i>Blechnum serrulatum</i> ) commonly occupies the groundcover. Exotic species cover is low and consists of melaleuca ( <i>Melaleuca quinquenervia</i> ), Ceasarweed ( <i>Urena lobata</i> ), shrubby false buttonweed ( <i>Spermacoce verticillata</i> ). Intense wildfire in the past decade has caused damage to the old growth forest canopy in the AA and vicinity.					
Significant nearby features Undeveloped land to the north, disturbed land and residential development to the south and west, agricultural lands to the east			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique to area		
Functions Provides cover, substrate, and refuge; breeding; foraging; water storage; water quality improvement; groundwater recharge; wildlife habitat			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 be found)  Birds ( green heron, red-bellied woodpecker, red shouldered hawk, herons); snakes (banded and green watersnakes, cottonmouth, mud, black racer); turtles (musk, red-bellied cooter, mud); frogs (leopard, pig, bull, green tree); mammals (feral hog, opossum, armadillo, raccoon, white-tailed deer)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Florida panther (state - E, fed - E); Big Cypress fox squirrel (state - T); Florida bonneted bat (state - E, federal - E)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  					
Additional relevant factors:  					
Assessment conducted by: Taylor Engineering, Inc.			Assessment date(s): May 2020		

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

Site/Project Name Collier County CWIP	Application Number SFWMD: 200214-2805	Assessment Area Name or Number Impact 22
Impact or Mitigation Impact - Direct	Assessment conducted by: Taylor Engineering, Inc.	Assessment date: May 2020

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

<b>Optimal (10)</b>	<b>Moderate(7)</b>	<b>Minimal (4)</b>	<b>Not Present (0)</b>
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	Availability of habitat outside the AA is fair. Agricultural lands to the south and east and residential land uses to the west likely adversely affect wildlife access to/from and utilization of the AA. Large expanses of undeveloped land north of the AA does provide wildlife access and movement support to the AA. Vegetation communities in close proximity to the AA contain low to moderate levels of exotic/invasive species cover.				
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>5</td> <td>0</td> </tr> </table>	w/o pres or current	with	5	0	
w/o pres or current	with				
5	0				
.500(6)(b)Water Environment (n/a for uplands)	Immediately adjacent drainage and clearing of private property for development including stormwater management have impacted the water environment in the immediate area. Hydroperiod, wet season average water levels, and dry season water table elevations in the adjacent wetland forest have been negatively impacted by agricultural stormwater drainage and infrastructure and nearby residential development. Proposed impacts to the AA include excavation and fill associated with flowway construction.				
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>4</td> <td>0</td> </tr> </table>	w/o pres or current	with	4	0	
w/o pres or current	with				
4	0				
.500(6)(c)Community structure	AA consists of a cypress-dominated wetland community with relatively low (<25%) exotic/invasive species cover. Canopy cover consists of bald cypress ( <i>Taxodium distichum</i> ). Swamp fern ( <i>Blechnum serrulatum</i> ) commonly occupies the groundcover. Exotic species cover is low and consists of melaleuca ( <i>Melaleuca quinquenervia</i> ), Ceasarweed ( <i>Urena lobata</i> ), shrubby false buttonweed ( <i>Spermacoce verticillata</i> ). Intense wildfire in the past decade has caused damage to the old growth forest canopy in the AA and vicinity. Proposed impacts to the AA include excavation and fill associated with flowway construction.				
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>7</td> <td>0</td> </tr> </table>	w/o pres or current	with	7	0	
w/o pres or current	with				
7	0				

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.533	0.000

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

For impact assessment areas
FL = delta x acres = -0.18

Delta = [with-current]
-0.533

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

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

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

Site/Project Name Collier County CWIP		Application Number SFWMD: 200214-2805		Assessment Area Name or Number Impact 1 -3	
FLUCCs code 624-E3		Further classification (optional) Cypress-Pine-Cabbage Palm (51-75% exotics)		Impact or Mitigation Site? Impact - Secondary	
Assessment Area Size 1.902					
Basin/Watershed Name/Number Rookery Bay		Affected Waterbody (Class) III		Special Classification (i.e. OFW, AP, other local/state/federal designation of im) None	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>These assessment area (AA) once comprised a portion of a large wetland system that is now disconnected and fragmented by roads, canals, residential and commercial development, and a landfill. The hydrology of the site has been altered by the surrounding infrastructure and development-related stormwater drainage.</p>					
<p>Assessment area description</p> <p>AA consists of a cypress-pine-cabbage palm wetland community infested (51-75% cover) with exotic/invasive species. Canopy cover consists of a mix of bald cypress (<i>Taxodium distichum</i>), slash pine (<i>Pinus elliotii</i>), cabbage palm (<i>Sabal palmetto</i>), melaleuca (<i>Melaleuca quinquenervia</i>), and earleaf acacia (<i>Acacia auriculiformis</i>). Common groundcover species include swamp fern (<i>Blechnum serrulatum</i>) and Ceasarweed (<i>Urena lobata</i>).</p>					
<p>Significant nearby features</p> <p>North: Collier County Resource Recovery Park; East: Collier County Landfill; South: I-75 and mostly undeveloped, vacant land; West: Collier County Sports Complex</p>			<p>Uniqueness (considering the relative rarity in relation to the regional landscape.)</p> <p>Not unique to region</p>		
<p>Functions</p> <p>Provides cover, substrate, and refuge; breeding; foraging; water storage; water quality improvement; groundwater recharge; wildlife habitat</p>			<p>Mitigation for previous permit/other historic use</p> <p>None</p>		
<p>Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)</p> <p>Birds ( green heron, red-bellied woodpecker, red shouldered hawk, herons, egrets); snakes (banded and green watersnakes, cottonmouth, mud, black racer); turtles (musk, red-bellied cooter, mud); frogs (leopard, pig, bull, green tree); mammals (feral hog, opossum, armadillo, raccoon, white-tailed deer, squirrels, Florida panther)</p>			<p>Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)</p> <p>Florida panther (state - E, fed - E); Big Cypress fox squirrel (state - T); Florida bonneted bat (state - E, federal - E)</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>Taylor Engineering, Inc.</p>			<p>Assessment date(s):</p> <p>May 2020</p>		

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

Site/Project Name Collier County CWIP	Application Number SFWMD: 200214-2805	Assessment Area Name or Number Impact 1 -3
Impact or Mitigation Impact - Secondary	Assessment conducted by: Taylor Engineering, Inc.	Assessment date: May 2020

<b>Scoring Guidance</b> 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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<b>Optimal (10)</b>	<b>Moderate(7)</b>	<b>Minimal (4)</b>	<b>Not Present (0)</b>
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 4 with 3	Secondary Impact - 1 point overall drop in UMAM score
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current 3 with 3	
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current 3 with 3	

Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.333 with 0.300
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If preservation as mitigation, Preservation adjustment factor = Adjusted mitigation delta =
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For impact assessment areas FL = delta x acres = -0.06
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Delta = [with-current] -0.033
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If mitigation Time lag (t-factor) = Risk factor =
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For mitigation assessment areas RFG = delta/(t-factor x risk) =
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**PART I – Qualitative Description  
(See Rule 62-345.400, F.A.C.)**

Site/Project Name Collier County CWIP		Application Number SFWMD: 200214-2805		Assessment Area Name or Number Impact 4 - 7	
FLUCCs code 624-E1		Further classification (optional) Cypress-Pine-Cabbage Palm (<25% exotics)		Impact or Mitigation Site? Impact - Secondary	Assessment Area Size 2.458
Basin/Watershed Name/Number Rookery Bay	Affected Waterbody (Class) III		Special Classification (i.e. OFW, AP, other local/state/federal designation) None		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  Assessment area (AA) hydrology and larger surrounding wetlands of the Picayune Strand State Forest have been altered (reduced hydroperiod and wet season water elevations due to regional stormwater drainage, interstate roadway infrastructure, and development of the Naples, Florida area).					
Assessment area description  AA consists of a cypress-pine-cabbage palm wetland community with relatively low (<25%) exotic/invasive species cover. Canopy cover consists of a mix of bald cypress ( <i>Taxodium distichum</i> ), scattered slash pine ( <i>Pinus elliotii</i> ), cabbage palm ( <i>Sabal palmetto</i> ), and melaleuca ( <i>Melaleuca quinquenervia</i> ). Swamp fern ( <i>Blechnum serrulatum</i> ) commonly occupies the groundcover. Exotic species cover is low and consists of melaleuca, Ceasarweed ( <i>Urena lobata</i> ), shrubby false buttonweed ( <i>Spermacoce verticillata</i> ), and torpedo grass ( <i>Panicum repens</i> ). Intense wildfire in the past decade has caused damage to the old growth forest canopy in the AA and vicinity.					
Significant nearby features  I-75 to the north			Uniqueness (considering the relative rarity in relation to the regional landscape.)  Not unique to region		
Functions  Provides cover, substrate, and refuge; breeding; foraging; water storage; water quality improvement; groundwater recharge; wildlife habitat			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 be found)  Birds ( green heron, red-bellied woodpecker, red shouldered hawk, herons); snakes (banded and green watersnakes, cottonmouth, mud, black racer); turtles (musk, red-bellied cooter, mud); frogs (leopard, pig, bull, green tree); mammals (feral hog, opossum, armadillo, raccoon, white-tailed deer, squirrels, Florida panther)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Florida panther (state - E, fed - E); red cockaded woodpecker (state - E, federal - E); Big Cypress fox squirrel (state - T); Florida bonneted bat (state - E, federal - E)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):					
Additional relevant factors:					
Assessment conducted by: Taylor Engineering, Inc.			Assessment date(s): May 2020		

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

Site/Project Name Collier County CWIP	Application Number SFWMD: 200214-2805	Assessment Area Name or Number Impact 4 - 7
Impact or Mitigation Impact - Secondary	Assessment conducted by: Taylor Engineering, Inc.	Assessment date: May 2020

<b>Scoring Guidance</b> 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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<b>Optimal (10)</b>	<b>Moderate(7)</b>	<b>Minimal (4)</b>	<b>Not Present (0)</b>
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 7 with 6	Secondary Impact - 1 point overall drop in UMAM score
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current 5 with 5	
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current 7 with 7	

Score = sum of above scores/30 (if uplands, divide by 20) current 0.633 or w/o pres with 0.600
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If preservation as mitigation, Preservation adjustment factor = Adjusted mitigation delta =
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For impact assessment areas FL = delta x acres = -0.08
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Delta = [with-current] -0.033
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If mitigation Time lag (t-factor) = Risk factor =
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For mitigation assessment areas RFG = delta/(t-factor x risk) =
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**PART I – Qualitative Description**  
**(See Rule 62-345.400, F.A.C.)**

Site/Project Name Collier County CWIP		Application Number SFWMD: 200214-2805		Assessment Area Name or Number Impact 8 - 9	
FLUCCs code 624-E2		Further classification (optional) Cypress-Pine-Cabbage Palm (25-50% exotics)		Impact or Mitigation Site? Impact - Secondary	Assessment Area Size 0.748
Basin/Watershed Name/Number Rookery Bay		Affected Waterbody (Class) III		Special Classification (i.e. OFW, AP, other local/state/federal designation of im) None	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  Assessment area (AA) hydrology and larger surrounding wetlands of the Picayune Strand State Forest have been altered (reduced hydroperiod and wet season water elevations due to regional stormwater drainage, interstate roadway infrastructure, and development of the Naples, Florida area).					
Assessment area description  AA consists of a cypress-pine-cabbage palm wetland community with moderate (25-50%) exotic/invasive species cover. Canopy cover consists of a mix of small bald cypress ( <i>Taxodium distichum</i> ), scattered slash pine ( <i>Pinus elliotii</i> ), cabbage palm ( <i>Sabal palmetto</i> ), and melaleuca ( <i>Melaleuca quinquenervia</i> ). Swamp fern ( <i>Blechnum serrulatum</i> ) commonly occupies the groundcover. Exotic species cover is moderate and consists of melaleuca, Ceasarweed ( <i>Urena lobata</i> ), shrubby false buttonweed ( <i>Spermacoce verticillata</i> ), and torpedo grass ( <i>Panicum repens</i> ) occasionally occur. Intense wildfire in the past decade has caused damage to the old growth forest canopy in the AA and vicinity.					
Significant nearby features  I-75 to the north			Uniqueness (considering the relative rarity in relation to the regional landscape.)  Not unique to region		
Functions  Provides cover, substrate, and refuge; breeding; foraging; water storage; water quality improvement; groundwater recharge; wildlife habitat			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 be found)  Birds ( green heron, red-bellied woodpecker, red shouldered hawk, herons); snakes (banded and green watersnakes, cottonmouth, mud, black racer); turtles (musk, red-bellied cooter, mud); frogs (leopard, pig, bull, green tree); mammals (feral hog, opossum, armadillo, raccoon, white-tailed deer, squirrels, Florida panther)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Florida panther (state - E, fed - E); red cockaded woodpecker (state - E, federal - E); Big Cypress fox squirrel (state - T); Florida bonneted bat (state - E, federal - E)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):					
Additional relevant factors:					
Assessment conducted by: Taylor Engineering, Inc.			Assessment date(s): May 2020		

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

Site/Project Name Collier County CWIP	Application Number SFWMD: 200214-2805	Assessment Area Name or Number Impact 8 - 9
Impact or Mitigation Impact - Secondary	Assessment conducted by: Taylor Engineering, Inc.	Assessment date: May 2020

<b>Scoring Guidance</b> 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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<b>Optimal (10)</b>	<b>Moderate(7)</b>	<b>Minimal (4)</b>	<b>Not Present (0)</b>
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 7 with 6	Secondary Impact - 1 point overall drop in UMAM score
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current 5 with 5	
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current 6 with 6	

Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.600 with 0.567
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If preservation as mitigation, Preservation adjustment factor = Adjusted mitigation delta =
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For impact assessment areas FL = delta x acres = -0.02
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Delta = [with-current] -0.033
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If mitigation Time lag (t-factor) = Risk factor =
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For mitigation assessment areas RFG = delta/(t-factor x risk) =
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**PART I – Qualitative Description**  
**(See Rule 62-345.400, F.A.C.)**

Site/Project Name Collier County CWIP		Application Number SFWMD: 200214-2805		Assessment Area Name or Number Impact 10 - 11	
FLUCCs code 624-E3		Further classification (optional) Cypress-Pine-Cabbage Palm (51-75% exotics)		Impact or Mitigation Site? Impact - Secondary	
Assessment Area Size 0.974		Basin/Watershed Name/Number Rookery Bay		Affected Waterbody (Class) III	
				Special Classification (i.e. OFW, AP, other local/state/federal designation of im) None	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands					
Assessment area hydrology and larger surrounding wetlands of the Picayune Strand State Forest have been altered (reduced hydroperiod and wet season water elevations due to regional stormwater drainage, interstate roadway infrastructure, and development of the Naples, Florida area).					
Assessment area description					
AA consists of a cypress-pine-cabbage palm wetland community with moderately high (51-75%) exotic/invasive species cover. Canopy cover consists of a mix of small bald cypress ( <i>Taxodium distichum</i> ), scattered slash pine ( <i>Pinus elliotii</i> ), cabbage palm ( <i>Sabal palmetto</i> ), and melaleuca ( <i>Melaleuca quinquenervia</i> ). Swamp fern ( <i>Blechnum serrulatum</i> ) commonly occupies the groundcover. Exotic species cover is moderately high and consists of melaleuca, Ceasarweed ( <i>Urena lobata</i> ), shrubby false buttonweed ( <i>Spermacoce verticillata</i> ), and torpedo grass ( <i>Panicum repens</i> ) occasionally occur. Intense wildfire in the past decade has caused damage to the old growth forest canopy in the AA and vicinity.					
Significant nearby features			Uniqueness (considering the relative rarity in relation to the regional landscape.)		
I-75 to the north			Not unique to region		
Functions			Mitigation for previous permit/other historic use		
Provides cover, substrate, and refuge; breeding; foraging; water storage; water quality improvement; groundwater recharge; wildlife habitat			None		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)		
Birds ( green heron, red-bellied woodpecker, red shouldered hawk, herons); snakes (banded and green watersnakes, cottonmouth, mud, black racer); turtles (musk, red-bellied cooter, mud); frogs (leopard, pig, bull, green tree); mammals (feral hog, opossum, armadillo, raccoon, white-tailed deer, squirrels, Florida panther)			Florida panther (state - E, fed - E); red cockaded woodpecker (state - E, federal - E); Big Cypress fox squirrel (state - T); Florida bonneted bat (state - E, federal - E)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):					
Additional relevant factors:					
Assessment conducted by: Taylor Engineering, Inc.			Assessment date(s): May 2020		

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

Site/Project Name Collier County CWIP	Application Number SFWMD: 200214-2805	Assessment Area Name or Number Impact 10 - 11
Impact or Mitigation Impact - Secondary	Assessment conducted by: Taylor Engineering, Inc.	Assessment date: May 2020

<b>Scoring Guidance</b> 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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<b>Optimal (10)</b>	<b>Moderate(7)</b>	<b>Minimal (4)</b>	<b>Not Present (0)</b>
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 7 with 6	Secondary Impact - 1 point overall drop in UMAM score
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current 5 with 5	
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current 4 with 4	

Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.533 with 0.500
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If preservation as mitigation, Preservation adjustment factor = Adjusted mitigation delta =
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For impact assessment areas FL = delta x acres = -0.03
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Delta = [with-current] -0.033
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If mitigation Time lag (t-factor) = Risk factor =
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For mitigation assessment areas RFG = delta/(t-factor x risk) =
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**PART I – Qualitative Description  
(See Rule 62-345.400, F.A.C.)**

Site/Project Name Collier County CWIP		Application Number SFWMD: 200214-2805		Assessment Area Name or Number Impact 12	
FLUCCs code 619		Further classification (optional) Exotic Wetland Hardwoods		Impact or Mitigation Site? Impact - Secondary	Assessment Area Size 0.319
Basin/Watershed Name/Number Rookery Bay	Affected Waterbody (Class) III		Special Classification (i.e. OFW, AP, other local/state/federal designation) None		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  Assessment area (AA) hydrology has been altered by clearing and drainging activity on immediately adjacent private properties. The larger surrounding wetlands of the Picayune Strand State Forest have been altered (reduced hydroperiod and wet season water elevations due to regional stormwater drainage, interstate roadway infrastructure, and development of the Naples, Florida area).					
Assessment area description  The AA lies along the north boundary of the Sanders Blvd residential property and consists of an exotic wetland hardwoods community composed of a near monoculture of melaleuca ( <i>Melaleuca quinquenervia</i> ) with occassional slash pine ( <i>Pinus elliottii</i> ) and cabbage palm ( <i>Sabal palmetto</i> ).					
Significant nearby features Residential property (Saunders Blvd property) to the south, large borrow pit to the southeast, I-75 3.4 miles to the north			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique to region		
Functions Provides cover, substrate, and refuge; breeding; foraging; water storage; water quality improvement; groundwater recharge; wildlife habitat			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 be found)  Birds ( green heron, red-bellied woodpecker, red shouldered hawk, herons); snakes (banded and green watersnakes, cottonmouth, mud, black racer); turtles (musk, red-bellied cooter, mud); frogs (leopard, pig, bull, green tree); mammals (feral hog, opossum, armadillo, raccoon, white-tailed deer)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Florida panther (state - E, fed - E); Big Cypress fox squirrel (state - T); Florida bonneted bat (state - E, federal - E)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):					
Additional relevant factors:					
Assessment conducted by: Taylor Engineering, Inc.			Assessment date(s): May 2020		

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

Site/Project Name Collier County CWIP	Application Number SFWMD: 200214-2805	Assessment Area Name or Number Impact 12
Impact or Mitigation Impact - Secondary	Assessment conducted by: Taylor Engineering, Inc.	Assessment date: May 2020

<b>Scoring Guidance</b> 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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<b>Optimal (10)</b>	<b>Moderate(7)</b>	<b>Minimal (4)</b>	<b>Not Present (0)</b>
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 6 with 5	Secondary Impact - 1 point overall drop in UMAM score
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current 3 with 3	
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current 2 with 2	

Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.367 with 0.333
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If preservation as mitigation, Preservation adjustment factor = Adjusted mitigation delta =
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For impact assessment areas FL = delta x acres = -0.01
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Delta = [with-current] -0.033
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If mitigation Time lag (t-factor) = Risk factor =
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For mitigation assessment areas RFG = delta/(t-factor x risk) =
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**PART I – Qualitative Description  
(See Rule 62-345.400, F.A.C.)**

Site/Project Name Collier County CWIP		Application Number SFWMD: 200214-2805		Assessment Area Name or Number Impact 14	
FLUCCs code 625-E4		Further classification (optional) Wet Pinelands Hydric Pine (>75% exotics)		Impact or Mitigation Site? Impact - Secondary	
Assessment Area Size 0.739					
Basin/Watershed Name/Number Rookery Bay		Affected Waterbody (Class) III		Special Classification (i.e. OFW, AP, other local/state/federal designation of im) None	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  Assessment area (AA) hydrology has been altered by clearing and drainging activity on immediately adjacent private properties. The larger surrounding wetlands of the Picayune Strand State Forest have been altered (reduced hydroperiod and wet season water elevations due to regional stormwater drainage, interstate roadway infrastructure, and development of the Naples, Florida area).					
Assessment area description The AA lies along the west and and portion of the south boundary of the Saunders Blvd residential property and consists of hydric pine flatwoods community heavily infested (>75% cover) with exotic species. Canopy species consist of melaleuca ( <i>Melaleuca quinquenervia</i> ) with occassional slash pine ( <i>Pinus elliottii</i> ) and cabbage palm ( <i>Sabal palmetto</i> ).					
Significant nearby features Residential property (Saunders Blvd property) to the south, large borrow pit to the southeast, I-75 3.4 miles to the north			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique to landscape		
Functions Provides cover, substrate, and refuge; breeding; foraging; water storage; water quality improvement; groundwater recharge; wildlife habitat			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 be found) Birds ( green heron, red-bellied woodpecker, red shouldered hawk, herons); snakes (banded and green watersnakes, cottonmouth, mud, black racer); turtles (musk, red-bellied cooter, mud); frogs (leopard, pig, bull, green tree); mammals (feral hog, opossum, armadillo, raccoon, white-tailed deer)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Florida panther (state - E, fed - E); red cockaded woodpecker (state - E, federal - E); Big Cypress fox squirrel (state - T); Florida bonneted bat (state - E, federal - E)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):					
Additional relevant factors:					
Assessment conducted by: Taylor Engineering, Inc.			Assessment date(s): May 2020		

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

Site/Project Name Collier County CWIP	Application Number SFWMD: 200214-2805	Assessment Area Name or Number Impact 14
Impact or Mitigation Impact - Secondary	Assessment conducted by: Taylor Engineering, Inc.	Assessment date: May 2020

<b>Scoring Guidance</b> 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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<b>Optimal (10)</b>	<b>Moderate(7)</b>	<b>Minimal (4)</b>	<b>Not Present (0)</b>
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 6 with 5	Secondary Impact - 1 point overall drop in UMAM score
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current 3 with 3	
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current 2 with 2	

Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.367 with 0.333
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If preservation as mitigation, Preservation adjustment factor = Adjusted mitigation delta =
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For impact assessment areas FL = delta x acres = -0.02
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Delta = [with-current] -0.033
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If mitigation Time lag (t-factor) = Risk factor =
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For mitigation assessment areas RFG = delta/(t-factor x risk) =
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**PART I – Qualitative Description  
(See Rule 62-345.400, F.A.C.)**

Site/Project Name Collier County CWIP		Application Number SFWMD: 200214-2805		Assessment Area Name or Number Impact 15	
FLUCCs code 624-E4		Further classification (optional) Cypress-Pine-Cabbage Palm (>75% exotics)		Impact or Mitigation Site? Impact - Secondary	
				Assessment Area Size 0.444	
Basin/Watershed Name/Number Rookery Bay		Affected Waterbody (Class) III		Special Classification (i.e. OFW, AP, other local/state/federal designation of im) None	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands					
Assessment area (AA) hydrology has been altered by clearing and drainage activity on immediately adjacent private properties. The larger surrounding wetlands of the Picayune Strand State Forest have been altered (reduced hydroperiod and wet season water elevations due to regional stormwater drainage, interstate roadway infrastructure, and development of the Naples, Florida area).					
Assessment area description AA consists of a cypress-pine-cabbage palm wetland community with high (>75%) exotic/invasive species cover. Canopy species consist of a mix of melaleuca ( <i>Melaleuca quinquenervia</i> ), bald cypress ( <i>Taxodium distichum</i> ), slash pine ( <i>Pinus elliotii</i> ), cabbage palm ( <i>Sabal palmetto</i> ). Common groundcover species include swamp fern ( <i>Blechnum serrulatum</i> ) and Ceasarweed ( <i>Urena lobata</i> ). Exotic species include melaleuca, Brazilian pepper ( <i>Schinus terebinthifolius</i> ), Ceaserweed, and paragrass ( <i>Urochloa mutica</i> ).					
Significant nearby features Residential property (Saunders Blvd property) to the south, large borrow pit to the southeast, I-75 3.4 miles to the north			Uniqueness (considering the relative rarity in relation to the regional landscape.)		
Functions Provides cover, substrate, and refuge; breeding; foraging; water storage; water quality improvement; groundwater recharge; 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 be found)  Birds ( green heron, red-bellied woodpecker, red shouldered hawk, herons); snakes (banded and green watersnakes, cottonmouth, mud, black racer); turtles (musk, red-bellied cooter, mud); frogs (leopard, pig, bull, green tree); mammals (feral hog, opossum, armadillo, raccoon, white-tailed deer)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Florida panther (state - E, fed - E); red cockaded woodpecker (state - E, federal - E); Big Cypress fox squirrel (state - T); Florida bonneted bat (state - E, federal - E)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):					
Additional relevant factors:					
Assessment conducted by: Taylor Engineering, Inc.			Assessment date(s): May 2020		

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

Site/Project Name Collier County CWIP	Application Number SFWMD: 200214-2805	Assessment Area Name or Number Impact 15
Impact or Mitigation Impact - Secondary	Assessment conducted by: Taylor Engineering, Inc.	Assessment date: May 2020

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

<b>Optimal (10)</b>	<b>Moderate(7)</b>	<b>Minimal (4)</b>	<b>Not Present (0)</b>
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	Secondary Impact - 1 point overall drop in UMAM score			
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>6</td> <td>5</td> </tr> </table>		w/o pres or current	with	6
w/o pres or current	with			
6	5			
.500(6)(b)Water Environment (n/a for uplands)				
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>3</td> <td>3</td> </tr> </table>		w/o pres or current	with	3
w/o pres or current	with			
3	3			
.500(6)(c)Community structure				
<p>1. Vegetation and/or</p> <p>2. Benthic Community</p> <table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>2</td> <td>2</td> </tr> </table>		w/o pres or current	with	2
w/o pres or current	with			
2	2			

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.367	0.333

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

For impact assessment areas
FL = delta x acres = -0.01

Delta = [with-current]
-0.033

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

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

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

Site/Project Name Collier County CWIP		Application Number SFWMD: 200214-2805		Assessment Area Name or Number Impact 16, 17, 19, 23	
FLUCCs code 510		Further classification (optional) Streams and Waterways		Impact or Mitigation Site? Impact - Secondary	Assessment Area Size 8.895
Basin/Watershed Name/Number Rookery Bay	Affected Waterbody (Class) III		Special Classification (i.e. OFW, AP, other local/state/federal designation of im None		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  Assessment area (AA) hydrology and larger surrounding wetlands have been altered (reduced hydroperiod and wet season water elevations due to regional stormwater drainage, interstate and local roadway infrastructure, and development of the Naples, Florida area). The AA occurs at the borders of newly constructed residential neighborhoods and neighborhoods currently under construction.					
Assessment area description  The AA consists of surface water drainage ditches bordering residential developments. Portions of the ditches contain vegetation such as common reed ( <i>Phragmites berlandieri</i> ), Carolina willow ( <i>Salix caroliniana</i> ), bald cypress ( <i>Taxodium distichum</i> ), cattail ( <i>Typha</i> sp.), broomsedge ( <i>Andropogon</i> spp.), maidencane ( <i>Panicum hemitomon</i> ), alligator flag ( <i>Thalia geniculata</i> ), and pickerelweed ( <i>Pontederia cordata</i> ). Exotic species occurring within the AA include Brazilian pepper ( <i>Schinus terebinthifolius</i> ), torpedo grass ( <i>Panicum repens</i> ), melaleuca ( <i>Melaleuca quinquenervia</i> ), earleaf acacia ( <i>Acacia quicculiformis</i> ), shrubby false buttonweed ( <i>Spermacoce verticillata</i> ), and Ceaserweed ( <i>Urena lobata</i> ).					
Significant nearby features  US 41 to the south, agricultural lands to the east, undeveloped lands to the north			Uniqueness (considering the relative rarity in relation to the regional landscape.)  Not unique to the region		
Functions  Provides cover, substrate, and refuge; breeding; foraging; water storage; water quality improvement; groundwater recharge; wildlife habitat			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 be found)  Birds ( herons, egrets, wading birds, red-winged blackbird); snakes (banded and green watersnakes, cottonmouth, mud, black racer); turtles (musk, red-bellied cooter, mud); frogs (leopard, pig, bull, green tree); mammals (feral hog, opossum, armadillo, raccoon, white-tailed deer)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Florida panther (state - E, fed - E); Big Cypress fox squirrel (state - T); Florida bonneted bat (state - E, federal - E)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  					
Additional relevant factors:  					
Assessment conducted by: Taylor Engineering, Inc.			Assessment date(s): May 2020		

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

Site/Project Name Collier County CWIP	Application Number SFWMD: 200214-2805	Assessment Area Name or Number Impact 16, 17, 19, 23
Impact or Mitigation Impact - Secondary	Assessment conducted by: Taylor Engineering, Inc.	Assessment date: May 2020

<b>Scoring Guidance</b> 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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<b>Optimal (10)</b>	<b>Moderate(7)</b>	<b>Minimal (4)</b>	<b>Not Present (0)</b>
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 4 with 3	Secondary Impact - 1 point overall drop in UMAM score
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current 3 with 3	
.500(6)(c)Community structure  <b>1. Vegetation and/or</b> <b>2. Benthic Community</b>  w/o pres or current 3 with 3	

Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.333 with 0.300
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If preservation as mitigation, Preservation adjustment factor = Adjusted mitigation delta =
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For impact assessment areas FL = delta x acres = -0.30
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Delta = [with-current] -0.033
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If mitigation Time lag (t-factor) = Risk factor =
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For mitigation assessment areas RFG = delta/(t-factor x risk) =
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**PART I – Qualitative Description**  
**(See Rule 62-345.400, F.A.C.)**

Site/Project Name Collier County CWIP		Application Number SFWMD: 200214-2805		Assessment Area Name or Number Impact 18	
FLUCCs code 624-E2		Further classification (optional) Cypress-Pine-Cabbage Palm (25-50% exotics)		Impact or Mitigation Site? Impact - Secondary	
Assessment Area Size 2.695		Basin/Watershed Name/Number Rookery Bay		Affected Waterbody (Class) III	
				Special Classification (i.e. OFW, AP, other local/state/federal designation of im) None	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands					
Assessment area (AA) hydrology and larger surrounding wetlands have been altered (reduced hydroperiod and wet season water elevations due to regional stormwater drainage, interstate and local roadway infrastructure, and development of the Naples, Florida area. The AA occurs at the western border of recently constructed residential neighborhoods and a main development access road. Hydrologically-altered wetlands lie to the east of the AA.					
Assessment area description The AA consists of a cypress-pine-cabbage palm forested wetland community with moderate (25-50%) exotic vegetation cover. Dominant canopy species include a mix of bald cypress ( <i>Taxodium distichum</i> ), slash pine ( <i>Pinus elliottii</i> ), cabbage palm ( <i>Sabal palmetto</i> ), dahoon holly ( <i>Ilex cassine</i> ), and laurel oak ( <i>Quercus laurifolia</i> ). Groundcover and shrub species include false nettle ( <i>Boehmeria cylindrica</i> ), myrsine ( <i>Myrsine cubana</i> ), and wax myrtle ( <i>Morella cerifera</i> ). Exotic species include Brazilian pepper ( <i>Schinus terebinthifolius</i> ), melaleuca ( <i>Melaleuca quinquenervia</i> ), Ceaseerweed ( <i>Urena lobata</i> ), and shrubby false buttonweed ( <i>Spermacoce verticillata</i> ).					
Significant nearby features US 41 to the south, residential development to the north, south, and east, mostly undeveloped land to west			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique to region		
Functions Provides cover, substrate, and refuge; breeding; foraging; water storage; water quality improvement; groundwater recharge; wildlife habitat			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 be found) Birds ( green heron, red-bellied woodpecker, red shouldered hawk, herons); snakes (banded and green watersnakes, cottonmouth, mud, black racer); turtles (musk, red-bellied cooter, mud); frogs (leopard, pig, bull, green tree); mammals (feral hog, opossum, armadillo, raccoon, white-tailed deer)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Florida panther (state - E, fed - E); Big Cypress fox squirrel (state - T); Florida bonneted bat (state - E, federal - E)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):					
Additional relevant factors:					
Assessment conducted by: Taylor Engineering, Inc.			Assessment date(s): May 2020		

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

Site/Project Name Collier County CWIP	Application Number SFWMD: 200214-2805	Assessment Area Name or Number Impact 18
Impact or Mitigation Impact - Secondary	Assessment conducted by: Taylor Engineering, Inc.	Assessment date: May 2020

<b>Scoring Guidance</b> 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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<b>Optimal (10)</b>	<b>Moderate(7)</b>	<b>Minimal (4)</b>	<b>Not Present (0)</b>
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 5 with 4	Secondary Impact - 1 point overall drop in UMAM score
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current 4 with 4	
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current 6 with 6	

Score = sum of above scores/30 (if uplands, divide by 20) current 0.500 or w/o pres with 0.467
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If preservation as mitigation, Preservation adjustment factor = Adjusted mitigation delta =
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For impact assessment areas FL = delta x acres = -0.09
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Delta = [with-current] -0.033
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If mitigation Time lag (t-factor) = Risk factor =
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For mitigation assessment areas RFG = delta/(t-factor x risk) =
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**PART I – Qualitative Description**  
**(See Rule 62-345.400, F.A.C.)**

Site/Project Name Collier County CWIP		Application Number SFWMD: 200214-2805		Assessment Area Name or Number Impact 20 - 21	
FLUCCs code 624-E1		Further classification (optional) Cypress-Pine-Cabbage Palm (<25% exotics)		Impact or Mitigation Site? Impact - Secondary	Assessment Area Size 0.619
Basin/Watershed Name/Number Rookery Bay	Affected Waterbody (Class) III		Special Classification (i.e. OFW, AP, other local/state/federal designation) None		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Assessment area (AA) hydrology and larger surrounding wetlands have been altered (reduced hydroperiod and wet season water elevations due to regional stormwater drainage, interstate and local roadway infrastructure, and development of the Naples, Florida area). The AA occurs at the borders of an active, drained agricultural area.					
Assessment area description AA consists of a cypress-pine-cabbage palm wetland community with relatively low (<25%) exotic/invasive species cover. Canopy cover consists of a mix of bald cypress ( <i>Taxodium distichum</i> ), slash pine ( <i>Pinus elliotii</i> ), cabbage palm ( <i>Sabal palmetto</i> ), and melaleuca ( <i>Melaleuca quinquenervia</i> ). Swamp fern ( <i>Blechnum serrulatum</i> ) commonly occupies the groundcover. Exotic species cover is low and consists of melaleuca, Ceasarweed ( <i>Urena lobata</i> ), shrubby false buttonweed ( <i>Spermacoce verticillata</i> ). Intense wildfire in the past decade has caused damage to the old growth forest canopy in the AA and vicinity.					
Significant nearby features Undeveloped land to the north, disturbed land and residential development to the south and west, agricultural lands to the east			Uniqueness (considering the relative rarity in relation to the regional landscape.) No unique to region		
Functions Provides cover, substrate, and refuge; breeding; foraging; water storage; water quality improvement; groundwater recharge; wildlife habitat			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 be found)  Birds ( green heron, red-bellied woodpecker, red shouldered hawk, herons); snakes (banded and green watersnakes, cottonmouth, mud, black racer); turtles (musk, red-bellied cooter, mud); frogs (leopard, pig, bull, green tree); mammals (feral hog, opossum, armadillo, raccoon, white-tailed deer)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Florida panther (state - E, fed - E); Big Cypress fox squirrel (state - T); Florida bonneted bat (state - E, federal - E)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):					
Additional relevant factors:					
Assessment conducted by: Taylor Engineering, Inc.			Assessment date(s): May 2020		

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

Site/Project Name Collier County CWIP	Application Number SFWMD: 200214-2805	Assessment Area Name or Number Impact 20 -21
Impact or Mitigation Impact - Secondary	Assessment conducted by: Taylor Engineering, Inc.	Assessment date: May 2020

<b>Scoring Guidance</b> 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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<b>Optimal (10)</b>	<b>Moderate(7)</b>	<b>Minimal (4)</b>	<b>Not Present (0)</b>
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 5 with 4	Secondary Impact - 1 point overall drop in UMAM score
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current 4 with 4	
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current 7 with 7	

Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.533 with 0.500
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If preservation as mitigation, Preservation adjustment factor = Adjusted mitigation delta =
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For impact assessment areas FL = delta x acres = -0.02
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Delta = [with-current] -0.033
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If mitigation Time lag (t-factor) = Risk factor =
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For mitigation assessment areas RFG = delta/(t-factor x risk) =
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**PART I – Qualitative Description  
(See Rule 62-345.400, F.A.C.)**

Site/Project Name Collier County CWIP		Application Number SFWMD: 200214-2805	Assessment Area Name or Number Impact 22
FLUCCs code 621-E1	Further classification (optional) Cypress (<25% exotics)		Impact or Mitigation Site? Impact - Secondary
Assessment Area Size 0.356			
Basin/Watershed Name/Number Rookery Bay	Affected Waterbody (Class) III	Special Classification (i.e. OFW, AP, other local/state/federal designation) None	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Assessment area (AA) hydrology and larger surrounding wetlands have been altered (reduced hydroperiod and wet season water elevations due to regional stormwater drainage, interstate and local roadway infrastructure, and development of the Naples, Florida area). The AA occurs at the borders of an active, drained agricultural area.			
Assessment area description AA consists of a cypress-dominated wetland community with relatively low (<25%) exotic/invasive species cover. Canopy cover consists of bald cypress ( <i>Taxodium distichum</i> ). Swamp fern ( <i>Blechnum serrulatum</i> ) commonly occupies the groundcover. Exotic species cover is low and consists of melaleuca ( <i>Melaleuca quinquenervia</i> ), Ceasarweed ( <i>Urena lobata</i> ), shrubby false buttonweed ( <i>Spermacoce verticillata</i> ). Intense wildfire in the past decade has caused damage to the old growth forest canopy in the AA and vicinity.			
Significant nearby features Undeveloped land to the north, disturbed land and residential development to the south and west, agricultural lands to the east		Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique to area	
Functions Provides cover, substrate, and refuge; breeding; foraging; water storage; water quality improvement; groundwater recharge; wildlife habitat		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 be found)  Birds ( green heron, red-bellied woodpecker, red shouldered hawk, herons); snakes (banded and green watersnakes, cottonmouth, mud, black racer); turtles (musk, red-bellied cooter, mud); frogs (leopard, pig, bull, green tree); mammals (feral hog, opossum, armadillo, raccoon, white-tailed deer)		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Florida panther (state - E, fed - E); Big Cypress fox squirrel (state - T); Florida bonneted bat (state - E, federal - E)	
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):			
Additional relevant factors:			
Assessment conducted by: Taylor Engineering, Inc.		Assessment date(s): May 2020	

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

Site/Project Name Collier County CWIP	Application Number SFWMD: 200214-2805	Assessment Area Name or Number Impact 22
Impact or Mitigation Impact - Secondary	Assessment conducted by: Taylor Engineering, Inc.	Assessment date: May 2020

<b>Scoring Guidance</b> 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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<b>Optimal (10)</b>	<b>Moderate(7)</b>	<b>Minimal (4)</b>	<b>Not Present (0)</b>
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 5 with 4	Secondary Impact - 1 point overall drop in UMAM score
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current 4 with 4	
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current 7 with 7	

Score = sum of above scores/30 (if uplands, divide by 20) current 0.533 or w/o pres with 0.500
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If preservation as mitigation, Preservation adjustment factor = Adjusted mitigation delta =
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For impact assessment areas FL = delta x acres = -0.01
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Delta = [with-current] -0.033
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If mitigation Time lag (t-factor) = Risk factor =
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For mitigation assessment areas RFG = delta/(t-factor x risk) =
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**PART I – Qualitative Description**  
**(See Rule 62-345.400, F.A.C.)**

Site/Project Name Collier County CWIP		Application Number SFWMD: 200214-2805		Assessment Area Name or Number Mitigation 1	
FLUCCs code 621/624/625/6172/630/643		Further classification (optional) Cypress(624) / Cypress-Pine-Cabbage Palm (624) / Hydric Pine Flatwoods (625) / Mixed Shrubs (6172) / Wetland Forested Mixed (630) / Wet Prairie (643)		Impact or Mitigation Site? Mitigation	
Assessment Area Size 527.700					
Basin/Watershed Name/Number Rookery Bay		Affected Waterbody (Class) III		Special Classification (i.e. OFW, AP, other local/state/federal designation) None	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  Assessment area (AA) hydrology and larger surrounding wetlands have been altered (reduced hydroperiod and wet season water elevations due to regional stormwater drainage, interstate and local roadway infrastructure, and development of the Naples, Florida area).					
Assessment area description  AA consists primarily of cypress-dominated forested wetland community with smaller, intermittent patches of cypress-pine-cabbage palm, hydric pine flatwoods, wet forested mixed, mixed shrub, and wet prairie wetland community types. Canopy species within cypress community consists of bald cypress ( <i>Taxodium distichum</i> ). Canopy species within the cypress-pine-cabbage palm community include bald cypress, slash pine ( <i>Pinus elliotii</i> ), cabbage palm ( <i>Sabal palmetto</i> ), and Melaleuca ( <i>Melaleuca quinquenervia</i> ). Canopy species within the hydric pine flatwoods community consists of slash pine with occasional cabbage palm.					
Significant nearby features  Undeveloped land surrounds the AA, I-75 2.8 miles to the north, residential development 2.5 mile to the west, agricultural lands 3.2 miles to the south		Uniqueness (considering the relative rarity in relation to the regional landscape.)  Not unique to area			
Functions  Provides cover, substrate, and refuge; breeding; foraging; water storage; water quality improvement; groundwater recharge; wildlife habitat		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 be found)  Birds ( green heron, red-bellied woodpecker, red shouldered hawk, herons); snakes (banded and green watersnakes, cottonmouth, mud, black racer); turtles (musk, red-bellied cooter, mud); frogs (leopard, pig, bull, green tree); mammals (feral hog, opossum, armadillo, raccoon, white-tailed deer)		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Florida panther (state - E, fed - E); red cockaded woodpecker (state - E, federal - E); Big Cypress fox squirrel (state - T); Florida bonneted bat (state - E, federal - E)			
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):					
Additional relevant factors:					
Assessment conducted by: Taylor Engineering, Inc.		Assessment date(s): May 2020			

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

Site/Project Name Collier County CWIP	Application Number SFWMD: 200214-2805	Assessment Area Name or Number Mitigation 1
Impact or Mitigation Mitigation	Assessment conducted by: Taylor Engineering, Inc.	Assessment date: May 2020

Scoring Guidance The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	<b>Optimal (10)</b>	<b>Moderate(7)</b>	<b>Minimal (4)</b>	<b>Not Present (0)</b>
	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	Availability of habitat outside of assessment area is good. Large expanses of undeveloped land borders the AA. Opportunities for wildlife access to and utilization of the AA is good.
	7	
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current	with	Hydroperiod, wet season average water levels, and dry season water table elevations in the AA and surrounding area have been negatively impacted by agricultural stormwater drainage and infrastructure and residential development. The AA occurs within the proposed core rehydration area. The proposed project will restore natural wetland hydrology.
	5	
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current	with	AA consists primarily of cypress-dominated forested wetland community with smaller, intermittent patches of cypress-pine-cabbage palm, hydric pine flatwoods, wet forested mixed, mixed shrub, and wet prairie wetland community types. Canopy species within cypress community consists of bald cypress ( <i>Taxodium distichum</i> ). Canopy species within the cypress-pine-cabbage palm community include bald cypress, slash pine ( <i>Pinus elliotii</i> ), cabbage palm ( <i>Sabal palmetto</i> ), and Melaleuca ( <i>Melaleuca quinquenervia</i> ). Canopy species within the hydric pine flatwoods community consists of slash pine with occasional cabbage palm. The proposed project will restore natural wetland hydrology which may benefit the vegetation community.
	7	

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	
with	
0.633	0.667

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

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
0.033

If mitigation
Time lag (t-factor) = 1
Risk factor = 1

For mitigation assessment areas
RFG = delta/(t-factor x risk) = 0.033