APPROVED JURISDICTIONAL DETERMINATION FORM U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A.	REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): June 20, 2016

3.	DISTRICT OFFICE	, FILE NAME, AND	NUMBER:Jacksonville District, Hill	Tide Estates / JD, SAJ-2016-00121
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C. PROJECT LOCATION AND BACKGROUND INFORMATION: The project is located in Section 26, Township 43 South, Rang 20 East.	e
State:FL County/parish/borough: Lee City: Boca Grande Center coordinates of site (lat/long in degree decimal format): Lat. 26.718765° N, Long82.260097° W. Universal Transverse Mercator: 17R Name of nearest waterbody: Charlotte Harbor	
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Charlotte Harbor Name of watershed or Hydrologic Unit Code (HUC): Charlotte Harbor and Pine Island Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request. Check if other sites (e.g., offsite mitigation sites, disposal sites, etc) are associated with this action and are recorded on a different JD form.	
D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY): ☐ Office (Desk) Determination. Date: ☐ Field Determination. Date(s): March 4, 2016	
SECTION II: SUMMARY OF FINDINGS A. RHA SECTION 10 DETERMINATION OF JURISDICTION.	
There Are "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required] Waters subject to the ebb and flow of the tide. Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce Explain:	
B. CWA SECTION 404 DETERMINATION OF JURISDICTION.	
There Are no "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]	ed.
1. Waters of the U.S. a. Indicate presence of waters of U.S. in review area (check all that apply): TNWs, including territorial seas Wetlands adjacent to TNWs Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs Non-RPWs that flow directly or indirectly into TNWs Wetlands directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs Impoundments of jurisdictional waters Isolated (interstate or intrastate) waters, including isolated wetlands	
b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: linear feet: width (ft) and/or acres. Wetlands: acres.	
c. Limits (boundaries) of jurisdiction based on: Pick List Elevation of established OHWM (if known):	
 Non-regulated waters/wetlands (check if applicable):³ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional Explain: 	l.

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

TNW

Identify TNW: Charlotte Harbor.

Summarize rationale supporting determination: Charlotte Harbor is subject to the ebb and flow of the tide.

Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under Rapanos have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:

Watershed size: Pick List Drainage area: Average annual rainfall: inches Average annual snowfall: inches

(ii) Physical Characteristics:

(a) Kelanonship with 114 W	(a)	Relationship	with	TNW
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☐ Tributary flows directly into TNW. Tributary flows through **Pick List** tributaries before entering TNW. Project waters are **Pick List** river miles from TNW. Project waters are **Pick List** river miles from RPW. Project waters are **Pick List** aerial (straight) miles from TNW. Project waters are **Pick List** aerial (straight) miles from RPW. Project waters cross or serve as state boundaries. Explain: Identify flow route to TNW⁵: Tributary stream order, if known:

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b)	General Tributary Characteristics (check all that apply): Tributary is: Natural Artificial (man-made). Explain: Manipulated (man-altered). Explain:				
	Tributary properties with respect to top of bank (estimate): Average width: feet Average depth: feet Average side slopes: Pick List.				
	Primary tributary substrate composition (check all that apply): Silts Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Other. Explain:				
	Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Presence of run/riffle/pool complexes. Explain: Tributary geometry: Pick List Tributary gradient (approximate average slope): %				
(c)	Flow: Tributary provides for: Pick List Estimate average number of flow events in review area/year: Pick List Describe flow regime: Other information on duration and volume:				
	Surface flow is: Pick List. Characteristics: .				
	Subsurface flow: Pick List. Explain findings: Dye (or other) test performed:				
	Tributary has (check all that apply): Bed and banks OHWM ⁶ (check all indicators that apply): clear, natural line impressed on the bank changes in the character of soil destruction of terrestrial vegetation the presence of wrack line sediment sorting leaf litter disturbed or washed away sediment deposition water staining other (list): Discontinuous OHWM. ⁷ Explain:				
	If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply): High Tide Line indicated by: oil or scum line along shore objects fine shell or debris deposits (foreshore) physical markings/characteristics tidal gauges other (list): Mean High Water Mark indicated by: survey to available datum; physical markings; wegetation lines/changes in vegetation types.				
Cha	emical Characteristics: racterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.) Explain: .tify specific pollutants, if known:				

(iii)

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

	(iv)	Biological Characteristics. Channel supports (check all that apply): Riparian corridor. Characteristics (type, average width): Wetland fringe. Characteristics: Habitat for: Federally Listed species. Explain findings: Fish/spawn areas. Explain findings: Other environmentally-sensitive species. Explain findings: Aquatic/wildlife diversity. Explain findings:
2.	Cha	racteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW
		Physical Characteristics: (a) General Wetland Characteristics: Properties: Wetland size: acres Wetland type. Explain: Wetland quality. Explain: Project wetlands cross or serve as state boundaries. Explain:
		(b) General Flow Relationship with Non-TNW: Flow is: Pick List. Explain: Surface flow is: Pick List Characteristics:
		Subsurface flow: Pick List. Explain findings:
		(c) Wetland Adjacency Determination with Non-TNW: ☐ Directly abutting ☐ Not directly abutting ☐ Discrete wetland hydrologic connection. Explain: ☐ Ecological connection. Explain: ☐ Separated by berm/barrier. Explain:
		(d) Proximity (Relationship) to TNW Project wetlands are Pick List river miles from TNW. Project waters are Pick List aerial (straight) miles from TNW. Flow is from: Pick List. Estimate approximate location of wetland as within the Pick List floodplain.
		Chemical Characteristics: Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Identify specific pollutants, if known:
	(iii)	Biological Characteristics. Wetland supports (check all that apply): Riparian buffer. Characteristics (type, average width): Vegetation type/percent cover. Explain: Habitat for: Federally Listed species. Explain findings: Fish/spawn areas. Explain findings: Other environmentally-sensitive species. Explain findings: Aquatic/wildlife diversity. Explain findings:
3.	Cha	racteristics of all wetlands adjacent to the tributary (if any) All wetland(s) being considered in the cumulative analysis: Pick List Approximately () acres in total are being considered in the cumulative analysis.

Directly abuts? (Y/N) Size (in acres) Directly abuts? (Y/N) Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

- 1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
- 2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
- 3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1.	TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area: ☐ TNWs: 490 linear feet width (ft), Or, .22 acres. ☐ Wetlands adjacent to TNWs: acres.
2.	RPWs that flow directly or indirectly into TNWs. Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft). Other non-wetland waters: acres. Identify type(s) of waters: .
3.	Non-RPWs ⁸ that flow directly or indirectly into TNWs. Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.
	Provide estimates for jurisdictional waters within the review area (check all that apply): Tributary waters: linear feet width (ft). Other non-wetland waters: acres. Identify type(s) of waters: .
4.	Wetlands directly abutting an RPW that flow directly or indirectly into TNWs. Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands. Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
	Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
	Provide acreage estimates for jurisdictional wetlands in the review area: acres.
5.	Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs. Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.
	Provide acreage estimates for jurisdictional wetlands in the review area: acres.
6.	Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs. Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.
	Provide estimates for jurisdictional wetlands in the review area: acres.
7.	As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional. Demonstrate that impoundment was created from "waters of the U.S.," or Demonstrate that water meets the criteria for one of the categories presented above (1-6), or Demonstrate that water is isolated with a nexus to commerce (see E below).
SUC	OLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, GRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY CH WATERS (CHECK ALL THAT APPLY): 10 which are or could be used by interstate or foreign travelers for recreational or other purposes. from which fish or shellfish are or could be taken and sold in interstate or foreign commerce. which are or could be used for industrial purposes by industries in interstate commerce. Interstate isolated waters. Explain: Other factors. Explain:
Ide	ntify water body and summarize rationale supporting determination:

E.

 ⁸See Footnote # 3.
 9 To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
 10 Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

		vide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft). Other non-wetland waters: acres. Identify type(s) of waters: Wetlands: acres.
F.		N-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY): If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements. Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce. Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR). Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: Other: (explain, if not covered above):
	fact	wide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> potential basis of jurisdiction is the MBR ors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional grament (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet width (ft). Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: . Wetlands: acres.
		wide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such ading is required for jurisdiction (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet, width (ft). Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: acres.
SE(CTIO	ON IV: DATA SOURCES.
A. 3		PORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked requested, appropriately reference sources below): Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:Passarella & Associates, Inc Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. Office does not concur with data sheets/delineation report. Data sheets prepared by the Corps: Corps navigable waters' study: U.S. Geological Survey Hydrologic Atlas: USGS NHD data.
		USGS 8 and 12 digit HUC maps. U.S. Geological Survey map(s). Cite scale & quad name: USDA Natural Resources Conservation Service Soil Survey. Citation: National wetlands inventory map(s). Cite name:Resource at Risk layer in Google Earth. State/Local wetland inventory map(s): FEMA/FIRM maps: 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929) Photographs: ☐ Aerial (Name & Date):Google Earth, February 17, 2016.
		or Other (Name & Date): Previous determination(s). File no. and date of response letter: Applicable/supporting case law: Applicable/supporting scientific literature: Other information (please specify):

B. ADDITIONAL COMMENTS TO SUPPORT JD: N/A.





PROJECT LOCATION MAP HILL TIDE ESTATES

T.S. 10/22/15

REVIEWED BY DATE

M.A.M. 10/22/15

REVISED DATE







	Soil Unit	Description	
	48	ST. AUGUSTINE SAND	
_			
<u>-</u>		100	200

Feet

NOTES:

AERIAL PHOTOGRAPH PROVIDED BY THE LEE COUNTY PROPERTY APPRAISER'S OFFICE WITH A FLIGHT DATES OF JANUARY - FEBRUARY 2015.

ROADWAY NETWORKS WERE ACQUIRED FROM THE FLORIDA GEOGRAPHIC DATA LIBRARY WEBSITE.

SOILS MAPPING WAS ACQUIRED FROM THE FLORIDA GEOGRAPHIC DATA LIBRARY WEBSITE OCTOBER 2007 AND CREATED BY THE NATURAL RESOURCES CONSERVATION SERVICE 1990.

SOILS MAP HILL TIDE ESTATES

	DRA WN B Y	DATE
	T.S.	10/22/15
1	REVIEW ED BY	DATE
	M.A.M.	10/22/15
	REVISED	DATE





AERIAL WITH FLUCFCS AND WETLANDS MAP HILL TIDE ESTATES

| DRAWN BY | DATE | T.S. | 10/22/15 | REVIEWED BY | DATE | M.A.M. | 10/22/15 | REVISED | DATE | T.S. | 12/23/15 |

LEGEND:



COE "WATERS OF THE U.S." (0.22 Ac.±)



GPS WETLAND LINE

FLUCFCS			% OF
CODES	DESCRIPTIONS	ACREAGE	TOTAL
322 E1	COASTAL DUNE (0-24% EXOTICS)	0.42 Ac.±	4.2%
437	AUSTRALIAN PINE	2.38 Ac. ±	23.8%
652	BEACH SHORELINE	0.22 Ac. ±	2.2%
740	CLEARED/MAINTAINED LAND	5.43 Ac.±	54.4%
743	LANDSCAPE BUFFER/BERM OR FENCE	1.11 Ac.±	11.1%
814	ROAD	0.30 Ac. ±	3.0%
815	ABANDONED DOCK FACILITY	0.04 Ac. ±	0.4%
830	UTILITY BUILDING	0.08 Ac.±	0.8%
	TOTAL	9.98 Ac.±	100.0%

NOTES:

AERIAL PHOTOGRAPHS WERE ACQUIRED THROUGH THE LEE COUNTY PROPERTY APPRAISER'S OFFICE WITH FLIGHT DATES OF JANUARY - FEBRUARY 2015.

PROPERTY BOUNDARY PER BCB HOMES, INC. DRAWING NO. DDDSE030314-2 BOCA GRANDE OIL TERMINAL SURVEY TO FPL.DWG DATED SEPTEMBER 30, 2015.

FLUCFCS LINES ESTIMATED FROM 1"=200' AERIAL PHOTOGRAPHS AND LOCATIONS APPROXIMATED.

FLUCFCS PER FLORIDA LAND USE, COVER AND FORMS CLASSIFICATION SYSTEM (FLUCFCS) (FDOT 1999).

UPLAND/WETLAND LIMITS WERE GPS AND HAVE NOT BEEN REVIEWED BY ANY REGULATORY AGENCY AND ARE SUBJECT TO CHANGE.





AERIAL WITH FLUCFCS AND WETLANDS AND COE DATA POINTS MAP HILL TIDE ESTATES

LEGEND:



COE "WATERS OF THE U.S." (0.22 Ac.±)



GPS WETLAND LINE



COE DATA POINT LOCATION AND NUMBER (TYP.)

FLUCFCS			% OF
CODES	DESCRIPTIONS	ACREAGE	TOTAL
322 E1	COASTAL DUNE (0-24% EXOTICS)	0.42 Ac.±	4.2%
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830	UTILITY BUILDING	0.08 Ac.±	0.8%
	TOTAL	9.98 Ac.±	100.0%

NOTES:

AERIAL PHOTOGRAPHS WERE ACQUIRED THROUGH THE LEE COUNTY PROPERTY APPRAISER'S OFFICE WITH FLIGHT DATES OF JANUARY - FEBRUARY 2015.

PROPERTY BOUNDARY PER BCB HOMES, INC. DRAWING NO. DDDSE030314-2 BOCA GRANDE OIL TERMINAL SURVEY TO FPL.DWG DATED SEPTEMBER 30, 2015.

FLUCFCS LINES ESTIMATED FROM I"=200' AERIAL PHOTOGRAPHS AND LOCATIONS APPROXIMATED.

FLUCFCS PER FLORIDA LAND USE, COVER AND FORMS CLASSIFICATION SYSTEM (FLUCFCS) (FDOT 1999).

UPLAND/WETLAND LIMITS WERE GPS AND HAVE NOT BEEN REVIEWED BY ANY REGULATORY AGENCY AND ARE SUBJECT TO CHANGE.



Project/Site: Hill Tide Estates	City/County: Lee		Sampling Date:
Applicant/Owner: Seagate Development Group, LLC		State: FL	
	Section Township Rai	nge: Section 26, Township	
			Slope (%) 0-2
Subregion (LRR or MLRA): LRRU Lat: 26.7			Datum: Decimal Degrees
Soil Map Unit Name: St. Augustine Sand		NWI classific	
Are climatic / hydrologic conditions on the site typical for this time of y	2012 Van / Na		
Are Vegetation No , Soil Yes , or Hydrology No significantly		'Normal Circumstances" p	
Are Vegetation No , Soil Yes , or Hydrology No naturally p	roblematic? (If ne	eeded, explain any answer	rs in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing	g sampling point l	ocations, transects	, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: Yes No No Remarks:	is the Sampled within a Wetlan		No No
Sampled area is located on the bay side on the beach. It appears fluctuations, thus naturally problematic.	to be located below the	e mean high tide line. Sar	nd is disturbed daily due to tidal
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indica	tors (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply		Surface Soil	
Surface Water (A1) Aquatic Fauna (B	•		etated Concave Surface (B8)
High Water Table (A2) Saturation (A3) Marl Deposits (B1 Hydrogen Sulfide		Drainage Pat Moss Trim Li	1 1
	heres along Living Roots		Nater Table (C2)
Sediment Deposits (B2)		Crayfish Burn	` '
Drift Deposits (B3)	ction in Tilled Soils (C6)	Saturation Vi	sible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Thin Muck Surface		Geomorphic	
Iron Deposits (B5) Uther (Explain in	Remarks)	Shallow Aqui	
Inundation Visible on Aerial Imagery (B7)		FAC-Neutral	rest (U5) loss (D8) (LRR T, U)
✓ Water-Stained Leaves (B9) Field Observations:		Spriagnum n	1055 (D6) (LRR 1, 0)
Surface Water Present? Yes No Depth (inches	s): N/A		
Water Table Present? Yes No ✓ Depth (inche	7		
Saturation Present? Yes No ✓ Depth (inche		etland Hydrology Presen	t? Yes No No
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial pho-	tos, previous inspections	s), ir avaliable:	
Remarks:			
Water marks observed on Spartina patens. Drift deposits observe leaves.	ed as high tide littoral she	elf. Water stains observe	ed on Coccoloba uvifera
	*		

	Absolute	Dominant Indicator	Sampling Point: 1A Dominance Test worksheet:
ree Stratum (Plot size: 30 foot radius)		Species? Status	Number of Dominant Species
			That Are OBL, FACW, or FAC:(A)
			Total Number of Dominant
	-		Species Across All Strata: (B)
			Descrit of Descinant County
			Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B
			Prevalence Index worksheet:
			Total % Cover of: Multiply by:
		= Total Cover	OBL species x 1 =
50% of total cover:	20% of	total cover:	FACW species x 2 =
apling/Shrub Stratum (Plot size: 30 foot radius)			FAC species x 3 =
N/A			FACU species x 4 =
			UPL species x 5 =
			Column Totals: (A) (B)
			Prevalence Index = B/A =
			Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation
			2 - Dominance Test is >50%
			3 - Prevalence Index is ≤3.01
500/ 54 4 4		= Total Cover	Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover:	20% of	total cover:	
erb Stratum (Plot size: 30 foot radius)	_	TAOW.	¹ Indicators of hydric soil and wetland hydrology must
Spartina patens		Yes FACW	be present, unless disturbed or problematic.
			Definitions of Four Vegetation Strata:
)			Tree - Woody plants, excluding vines, 3 in. (7.6 cm) o
			more in diameter at breast height (DBH), regardless or
			height.
			Sapling/Shrub - Woody plants, excluding vines, less
,			than 3 in. DBH and greater than 3,28 ft (1 m) tall.
			Herb - All herbaceous (non-woody) plants, regardless
			of size, and woody plants less than 3.28 ft tall.
			Microducine Allowed Circumstanting 2 20 5 in
			Woody vine - All woody vines greater than 3.28 ft in height.
	5 :	Total Cover	
50% of total cover: 2.5		total cover:	
oody Vine Stratum (Plot size: 30 foot radius)			
N/A			
	S.————————————————————————————————————		
			Hydrophytic
		: Total Cover	Vegetation Present? Yes ✓ No
50% of total cover:		total cover:	100
marks: (If observed, list morphological adaptations bel-	w).		
andy beach with little to no vegetation present.			
- '			

SOIL			

SOIL				Sampling Point: 1A
Profile Desc	ription: (Describe to the depth	needed to document the indicator or confirm	the absence of indica	itors.)
Depth	Matrix	Redox Features		
(inches)	Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture	Remarks
				
				
				*
1= -			2	17-1 14-14-1
		educed Matrix, MS=Masked Sand Grains.	² Location: PL=Pore	
	ndicators: (Applicable to all Li		<u> </u>	lematic Hydric Soils ³ :
Histosol	•	Polyvalue Below Surface (S8) (LRR S, T, U)		
	ipedon (A2)	Thin Dark Surface (S9) (LRR S, T, U)	2 cm Muck (A10	
Black His	· ·	Loamy Mucky Mineral (F1) (LRR O)	P=	(F18) (outside MLRA 150A,B)
	n Sulfide (A4)	Loamy Gleyed Matrix (F2)		plain Soils (F19) (LRR P, S, T)
	Layers (A5)	Depleted Matrix (F3)		ht Loamy Soils (F20)
	Bodies (A6) (LRR P, T, U)	Redox Dark Surface (F6)	(MLRA 153B)	
	cky Mineral (A7) (LRR P, T, U)	Depleted Dark Surface (F7)	Red Parent Mat	
	esence (A8) (LRR U)	Redox Depressions (F8)		ark Surface (TF12)
1 cm Mu	ck (A9) (LRR P, T)	Mari (F10) (LRR U)	Other (Explain in	n Remarks)
	Below Dark Surface (A11)	Depleted Ochric (F11) (MLRA 151)	2	
	rk Surface (A12)	Iron-Manganese Masses (F12) (LRR O, P, 1	•	ydrophytic vegetation and
	airie Redox (A16) (MLRA 150A)	Umbric Surface (F13) (LRR P, T, U)	•	ology must be present,
	lucky Mineral (S1) (LRR O, S)	Delta Ochric (F17) (MLRA 151)	unless distur	bed or problematic.
	leyed Matrix (S4)	Reduced Vertic (F18) (MLRA 150A, 150B)		
	edox (S5)	Piedmont Floodplain Soils (F19) (MLRA 149		
	Matrix (S6)	Anomalous Bright Loamy Soils (F20) (MLRA	(149A, 153C, 153D)	
	face (S7) (LRR P, S, T, U)			
Restrictive L	.ayer (If observed):			
Type:		_		
Depth (inc	:hes):	_	Hydric Soil Present	? Yes No
Remarks:				
		1.5. 1. 45 L. Po		
Soil pit dug	to 18 inches in sand just below n	nean nigh tide line.		

1A

Project/Site: Hill Tide Estates	City/County: Lee		Sampling Date: 12/11/15
Applicant/Owner: Seagate Development Group, LLC		State: FL	
	Section, Township,	, Range: Section 26, Townsh	ip 43 East, Range 20 South
Landform (hillslope, terrace, etc.): Shoreline			Slope (%): 0-2
			Datum: Decimal Degrees
Soil Map Unit Name: St. Augustine Sand		NWI classifi	
Are climatic / hydrologic conditions on the site typical for t	his time of year? Yes	(If no, explain in f	
Are Vegetation NO , Soil NO , or Hydrology NO		Are "Normal Circumstances"	
Are Vegetation NO , Soil NO , or Hydrology NO		If needed, explain any answ	
			•
SUMMARY OF FINDINGS - Attach site map	p showing sampling poli	nt locations, transect	s, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes Yes	No Is the Samp within a We	· I	No ✓
Remarks:	2		
Area sampled was not within a wetland.			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indic	ators (minimum of two required)
Primary Indicators (minimum of one is required, check a	II that apply)	Surface Soi	Cracks (B6)
Surface Water (A1)	tic Fauna (B13)	Sparsely Ve	egetated Concave Surface (B8)
High Water Table (A2)	Deposits (B15) (LRR U)	Drainage Pa	atterns (B10)
	ogen Sulfide Odor (C1)	Moss Trim I	· · ·
	zed Rhizospheres along Living R		Water Table (C2)
	nce of Reduced Iron (C4) nt Iron Reduction in Tilled Soils (I	Crayfish Bu	/isible on Aerial Imagery (C9)
	Muck Surface (C7)		Position (D2)
	(Explain in Remarks)	Shallow Aq	uitard (D3)
Inundation Visible on Aerial Imagery (B7)		FAC-Neutra	I Test (D5)
Water-Stained Leaves (B9)		Sphagnum	moss (D8) (LRR T, U)
Field Observations:	NI/A		
	Depth (inches): N/A Depth (inches): > 18		
	Depth (inches): > 18 Depth (inches): N/A	Wetland Hydrology Prese	nt? Yes No ✓
(includes capillary fringe)			IIII IES
Describe Recorded Data (stream gauge, monitoring well	I, aerial photos, previous inspect	ions), if available:	
Remarks:			
No hydrologic indicators were observed.			
No flydrologic indicators were observed,			

	Absolute	Dominant	Indicator	Dominance Test worksheet:	1B
ree Stratum (Plot size: 30 foot radius)		Species?		Number of Dominant Species	
N/A				That Are OBL, FACW, or FAC:	(A)
					. ,
				Total Number of Dominant Species Across All Strata:2	/D)
				Species Across Air Strata.	(0)
				Percent of Dominant Species	
				That Are OBL, FACW, or FAC:	(A/E
				Prevalence Index worksheet:	-
				Total % Cover of: Multiply by:	
		= Total Cov	ег	OBL species x 1 =	_
50% of total cover:	20% of	total cover:		FACW species x 2 =	
apling/Shrub Stratum (Plot size: 30 foot radius				FAC species x 3 =	
Coccoloba uvifera	80	Yes	FACU	FACU species x 4 =	_
Schinus terebinthifolius	15	No	FAC	UPL species x 5 =	_
				Column Totals: (A)	(E
					- 877
				Prevalence Index = B/A =	-
				Hydrophytic Vegetation Indicators:	
				1 - Rapid Test for Hydrophytic Vegetation	
				2 - Dominance Test is >50%	
				3 - Prevalence Index is ≤3.0¹	
		= Total Cov	er		- \
50% of total cover:47.5	20% of	total cover	19	Problematic Hydrophytic Vegetation ¹ (Explain	1)
erb Stratum (Plot size:30 foot radius)		10101 00101.			
	5	Voc	FACU	Indicators of hydric soil and wetland hydrology m	ıust
				be present, unless disturbed or problematic.	
				Definitions of Four Vegetation Strata:	
/				Tree - Woody plants, excluding vines, 3 in. (7.6 c	:m) (
				more in diameter at breast height (DBH), regardle	
*				height.	
·				 Sapling/Shrub – Woody plants, excluding vines,	loca
				than 3 in. DBH and greater than 3.28 ft (1 m) tall.	162
·					
				Herb - All herbaceous (non-woody) plants, regar	dles
				of size, and woody plants less than 3.28 ft tall.	
)				Woody vine - All woody vines greater than 3.28	ft in
£				height.	
-					
	5=	Total Cove	er		_
50% of total cover: 2.5	20% of	total cover:	1		
oody Vine Stratum (Plot size: 30 foot radius)	_				
N/A					
				Hydrophytic	
		Total Cove	er	Vegetation	
50% of total cover:	20% of	total cover:		Present? Yes No V	
marks: (If observed, list morphological adaptations below	_				_
erbaceous ground cover mostly present. Lots of Casual	ina equiset	ifolia needle	es and Coo	ccoloba uvifera leaves. No hydrophytic vegetation	was
bserved to be dominant in the landscape.					

-	-	

	1B	
Sampling Point: _	16	
ators.)		
Remarks	_	

Profile Desc	ription: (Describe t	to the depth	needed to docu	ment the l	ndlcator	or confirm	the absence of	indicators.)
Depth	Matrix			x Features		1 = -2	Tautura	Demonto
(inches)	Color (moist)	<u>%</u> _	Color (moist)	%		Loc2	<u>Texture</u>	Remarks
0-8	10 YR 5/2	100 _						
8+	10 YR 7/3	100						
				347				
-								
								 0:
5. 								
-								
	oncentration, D=Depl					ains.		L=Pore Lining, M=Matrix
Hydric Soil	ndicators: (Applica	able to all LF	tRs, unless othe	rwise note	ed.)		Indicators fo	r Problematic Hydric Solis ³ :
Histosol	•		Polyvalue Be				-	ck (A9) (LRR O)
	pipedon (A2)		Thin Dark St	. ,			- Comment	ck (A10) (LRR S)
	stic (A3)		Loamy Muck	•		(0)		Vertic (F18) (outside MLRA 150A,B)
	n Sulfide (A4) I Layers (A5)		Loamy Gleye Depleted Ma		F2)			t Floodplain Soils (F19) (LRR P, S, T) us Bright Loamy Soils (F20)
	Bodies (A6) (LRR P.	T. U)	Redox Dark	, ,	6)		100	153B)
	cky Mineral (A7) (LR		Depleted Da		-			ent Material (TF2)
Muck Pr	esence (A8) (LRR U)	Redox Depre	essions (F	3)		☐ Very Sha	illow Dark Surface (TF12)
1 cm Mu	ck (A9) (LRR P, T)		Marl (F10) (L	.RR U)			Other (E)	xplain in Remarks)
	i Below Dark Surface	e (A11)	Depleted Oc	, ,	•	•	2	
	irk Surface (A12)		Iron-Mangan		, , ,			ors of hydrophytic vegetation and
_	airie Redox (A16) (№ lucky Mineral (S1) (L					, u)		nd hydrology must be present, s disturbed or problematic.
	ilicky iviinerai (ST) (L ileyed Matrix (S4)	.KR 0, 3)	Delta Ochric Reduced Ve			0A 150B)		s disturbed of problematic.
	edox (S5)		Piedmont Fle					
	Matrix (S6)					•	A 149A, 153C, 1	53D)
	face (S7) (LRR P, S	, T, U)	=	-				·
Restrictive I	.ayer (if observed):							
Туре:			_					
Depth (inc	ches):		 8				Hydric Soil Pr	resent? Yes No
Remarks:								
No hydric so	oil indicators were ob	served. Soi	l pit was dug to 1	8 inches.				
l .								
		-						

Project/Site: Hill Tide Estates City/County: Lee	Sampling Date: 12/11/15
	Sampling Point: 2A
Investigator(s): Mike Myers Section, Township, Range: Section 26, Tow	
Landform (hillslope, terrace, etc.): Shoreline Local relief (concave, convex, none): None	
Subregion (LRR or MLRA): LRRU Lat: 26.71818 Long: -82.259029	
	sification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes Vo No (If no, explain	
Are Vegetation NO, Soil Yes, or Hydrology NO significantly disturbed? Are "Normal Circumstance"	es" present? Yes V No
Are Vegetation NO , Soil Yes , or Hydrology NO naturally problematic? (If needed, explain any an	
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transe	cts, important features, etc.
Hydrophytic Vegetation Present? Yes No Lethe Sampled Area	
Hydric Soil Present?	√ ,,, □
Wetland Hydrology Present? Yes No within a Wetland? Yes	V No L
Remarks:	
Sampled area is located on the bay side on the beach. It appears to be located below the mean high tide line. fluctuations, thus naturally problematic.	Sand is disturbed daily due to tidal
inuctuations, thus naturally problematic.	
HYDROLOGY	
	dicators (minimum of two required)
	Soil Cracks (B6)
	Vegetated Concave Surface (B8)
	Patterns (B10)
Saturation (A3) Hydrogen Sulfide Odor (C1) Moss Tri	m Lines (B16)
	son Water Table (C2)
	Burrows (C8)
	n Visible on Aerial Imagery (C9)
	phic Position (D2)
Union Deposits (65)	Nauitord (D3)
Injundation Visible on Aerial Imagery (87)	Aquitard (D3) utral Test (D5)
	itral Test (D5)
Water-Stained Leaves (B9)	itral Test (D5)
Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes No ✓ Depth (inches): N/A Water Table Present? Yes No ✓ Depth (inches): > 18	itral Test (D5)
Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes No ✓ Depth (inches): N/A Water Table Present? Yes No ✓ Depth (inches): > 18 Saturation Present? Yes No ✓ Depth (inches): N/A Wetland Hydrology Present?	m moss (D8) (LRR T, U)
Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes No ✓ Depth (inches): N/A Water Table Present? Yes No ✓ Depth (inches): > 18	m moss (D8) (LRR T, U)
Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes No ✓ Depth (inches): N/A Water Table Present? Yes No ✓ Depth (inches): > 18 Saturation Present? Yes No ✓ Depth (inches): N/A (includes capillary fringe)	m moss (D8) (LRR T, U)
Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes No ✓ Depth (inches): N/A Water Table Present? Yes No ✓ Depth (inches): > 18 Saturation Present? Yes No ✓ Depth (inches): N/A (includes capillary fringe)	m moss (D8) (LRR T, U)
Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes No ✓ Depth (inches): N/A Water Table Present? Yes No ✓ Depth (inches): > 18 Saturation Present? Yes No ✓ Depth (inches): N/A Wetland Hydrology Preserbe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	m moss (D8) (LRR T, U)
Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes No ✓ Depth (inches): N/A Water Table Present? Yes No ✓ Depth (inches): > 18 Saturation Present? Yes No ✓ Depth (inches): N/A Wetland Hydrology Present Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	m moss (D8) (LRR T, U)
Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes No ✓ Depth (inches): N/A Water Table Present? Yes No ✓ Depth (inches): > 18 Saturation Present? Yes No ✓ Depth (inches): N/A Wetland Hydrology Present Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	m moss (D8) (LRR T, U)
Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes No ✓ Depth (inches): N/A Water Table Present? Yes No ✓ Depth (inches): > 18 Saturation Present? Yes No ✓ Depth (inches): N/A Wetland Hydrology Present Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	m moss (D8) (LRR T, U)
Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes No ✓ Depth (inches): N/A Water Table Present? Yes No ✓ Depth (inches): > 18 Saturation Present? Yes No ✓ Depth (inches): N/A Wetland Hydrology Present Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	m moss (D8) (LRR T, U)
Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes No ✓ Depth (inches): N/A Water Table Present? Yes No ✓ Depth (inches): > 18 Saturation Present? Yes No ✓ Depth (inches): N/A Wetland Hydrology Present Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	m moss (D8) (LRR T, U)
Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes No ✓ Depth (inches): N/A Water Table Present? Yes No ✓ Depth (inches): > 18 Saturation Present? Yes No ✓ Depth (inches): N/A Wetland Hydrology Present Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	m moss (D8) (LRR T, U)
Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes No ✓ Depth (inches): N/A Water Table Present? Yes No ✓ Depth (inches): > 18 Saturation Present? Yes No ✓ Depth (inches): N/A Wetland Hydrology Present Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	m moss (D8) (LRR T, U)
Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes No ✓ Depth (inches): N/A Water Table Present? Yes No ✓ Depth (inches): > 18 Saturation Present? Yes No ✓ Depth (inches): N/A Wetland Hydrology Present Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	m moss (D8) (LRR T, U)

	Absolute	Dominant	Indicator	Dominance Test worksheet:
ree <u>Stratum</u> (Plot size: <u>30 foot radius</u>) N/A	% Cover	Species?		Number of Dominant Species That Are OBL, FACW, or FAC:1 (A
				Total Number of Dominant Species Across All Strata: 1 (B
				Percent of Dominant Species
				That Are OBL, FACW, or FAC:100 (A
				Prevalence Index worksheet:
				Total % Cover of:Multiply by:
		= Total Cov	er	OBL species x 1 =
50% of total cover:	20% of	total cover:		FACW species x 2 =
apling/Shrub Stratum (Plot size: 30 foot radius)				FAC species x 3 =
N/A				FACU species x 4 =
				UPL species x 5 =
-				Column Totals: (A)
				Prevalence Index = B/A =
				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
				2 - Dominance Test is >50%
		- Total Cov		3 - Prevalence Index is ≤3.0¹
EOW of total across				Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover:	20% 01	total cover.		
erb Stratum (Plot size: 30 foot radius)	05	V	FAC	¹ Indicators of hydric soil and wetland hydrology mus
Chasmanthium latifolium		Yes	FAC	be present, unless disturbed or problematic.
Batis maritima	2	No_	OBL	Definitions of Four Vegetation Strata:
				Tree - Woody plants, excluding vines, 3 in. (7.6 cm)
				more in diameter at breast height (DBH), regardless
				height.
				Continui@hash Mandu plants avaluding since la
				Sapling/Shrub - Woody plants, excluding vines, les than 3 in. DBH and greater than 3.28 ft (1 m) tall.
				Herb - All herbaceous (non-woody) plants, regardle
				of size, and woody plants less than 3.28 ft tall.
				Woody vine - All woody vines greater than 3.28 ft i
				height.
	27	Total Cov	er	
50% of total cover: 13.	5 20% of	total cover:	5.4	
oody Vine Stratum (Plot size: 30 foot radius)				
N/A				
,				
				Hydrophytic
		= Total Cov		Vegetation Present? Yes ✓ No
50% of total cover:	20% of	total cover:		11030111: 1105
emarks: (If observed, list morphological adaptations be	ow).			
andy beach with little to no vegetation present.				

SOIL		Sampling Point: 2A
Profile Description: (Describe to the depth	needed to document the indicator or confirm	the absence of indicators.)
Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
		2
¹ Type: C=Concentration, D=Depletion, RM=Ri Hydric Soil Indicators: (Applicable to all LR		² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U)	Polyvalue Below Surface (S8) (LRR S, T, U) Thin Dark Surface (S9) (LRR S, T, U) Loamy Mucky Mineral (F1) (LRR O) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, 1) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 148) Anomalous Bright Loamy Soils (F20) (MLRA	2 cm Muck (A10) (LRR S) Reduced Vertic (F18) (outside MLRA 150A,B) Piedmont Floodplain Soils (F19) (LRR P, S, T) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Restrictive Layer (If observed):		
Type:		
Depth (inches):	_	Hydric Soil Present? Yes ✓ No
Remarks:	- :	
Soil pit dug to 18 inches in sand just below m	ean high tide line.	

Project/Site: Hill Tide Estates	City/County: Lee	Sampling Date: 12/11/15
Applicant/Owner: Seagate Developme	ent Group, LLC State	FL Sampling Point: 2B
Investigator(s): Mike Myers		26, Township 43 East, Range 20 South
Landform (hillslope, terrace, etc.); Shor): None Slope (%) 0-2
Subregion (LRR or MLRA): LRRU	Lat: 26.718246 Long: -82.25	
Soil Map Unit Name: St. Augustine Sar		NWI classification:
		explain in Remarks.)
		umstances" present? Yes ✓ No
		n any answers in Remarks.)
	tach site map showing sampling point locations,	•
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: Area sampled was not within a wetlar	Yes No Is the Sampled Area within a Wetland?	Yes No ✓
HYDROLOGY		
Wetland Hydrology Indicators:	Seco	ondary Indicators (minimum of two required)
Primary Indicators (minimum of one is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Water-Stained Leaves (B9)	Aquatic Fauna (B13) Marl Deposits (B15) (LRR U) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Other (Explain in Remarks)	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe)	No ✓ Depth (inches): N/A No ✓ Depth (inches): > 18 No ✓ Depth (inches): N/A Wetland Hydro e, monitoring well, aerial photos, previous inspections), if available	logy Present? Yes No ✓
Describe Recorded Data (Stream gaug	e, monitoring wair, actial priolos, previous inspections), if available	
Remarks: No hydrologic indicators were observed.	∍d. _≤	

/EGETATION (Four Strata) - Use scientific nar	nes or pr	arreo.		Sampling Point:2B
_A N/Δ	% Cover	Dominant Species?	Status	Dominance Test worksheet: Number of Dominant Species
·				That Are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant
3				Species Across All Strata: 3 (B)
4,				Percent of Dominant Species
5.				That Are OBL, FACW, or FAC: 0.67 (A/I
6				Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
B ₁				OBL species 0 x 1 = 0
		= Total Cov		FACW species 0 x 2 = 0
50% of total cover:	20% of	total cover:		FAC species 90 x 3 = 270
Sapling/Shrub Stratum (Plot size: 30 foot radius)	40	.,	=	FACU species 10 x 4 = 40
1. Coccoloba uvifera			FACU	UPL species 0 x 5 = 0
2				Column Totals: 100 (A) 310 (B
3				Column Totals(A)(B
4				Prevalence Index = B/A =3.1
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
B				3 - Prevalence Index is ≤3.01
	:	= Total Cov	er	Problematic Hydrophytic Vegetation (Explain)
50% of total cover: 5	20% of	total cover:	2	
Herb Stratum (Plot size: 30 foot radius)				¹ Indicators of hydric soil and wetland hydrology must
Chasmanthium latifolium	60	Yes	FAC	be present, unless disturbed or problematic.
2. Helianthus debilis	20	Yes	FAC	Definitions of Four Vegetation Strata:
3. Panicum amarum	10	No	FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
4.				more in diameter at breast height (DBH), regardless of
5				height.
5				Sapling/Shrub – Woody plants, excluding vines, less
7				than 3 in. DBH and greater than 3.28 ft (1 m) tall.
3				Herb - All herbaceous (non-woody) plants, regardles
)				of size, and woody plants less than 3.28 ft tall.
10				Manager 411
11				Woody vine - All woody vines greater than 3.28 ft in height.
12.				
	90 =	Total Cove	er	
50% of total cover: 45		total cover:		
Noody Vine Stratum (Plot size: 30 foot radius)				
N/A				
2				
3.				
1				
5				
		Total Cove		Hydrophytic Vegetation
50% of total cover:				Present? Yes No ✓
		total cover.		
50% of total cover:		total cover:		Present? Yes No 🗸

0	Dainte	2B
Sampling	Point.	20

Depth	ription: (Describe) Matrix	to the depti		ox Features		vo	45551100 01 11	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-12+	10 YR 8/1	100						
						/		
				-:				
7.0		8:					,	
Type: C=Co	ncentration, D=Dep	letion, RM=F	Reduced Matrix, N	IS=Masked	Sand Gra	ains.	² Location: PL=	Pore Lining, M=Matrix.
	ndicators: (Applica						Indicators for	Problematic Hydric Solls ³ :
Histosol	(A1)		Polyvalue B	elow Surfa	ce (S8) (L	.RR S. T. U) 1 cm Muck	(A9) (LRR O)
=	ipedon (A2)		Thin Dark S				·	(A10) (LRR S)
Black His			Loamy Muc				Reduced V	ertic (F18) (outside MLRA 150A,
Hydrogei	n Sulfide (A4)		Loamy Gley	ed Matrix (F2)			loodplain Soils (F19) (LRR P, S, 1
Stratified	Layers (A5)		Depleted M	atrix (F3)			Anomalous	Bright Loamy Soils (F20)
Organic	Bodies (A6) (LRR P,	, T, U)	Redox Dark	Surface (F	6)		(MLRA 1	53B)
5 cm Mu	cky Mineral (A7) (LF	RR P, T, U)	Depleted Da	ark Surface	(F7)			t Material (TF2)
Muck Pre	esence (A8) (LRR U)	Redox Depr		3)			ow Dark Surface (TF12)
	ck (A9) (LRR P, T)		Marl (F10) (Other (Exp	lain in Remarks)
Depleted	Below Dark Surface	e (A11)	Depleted O					
	rk Surface (A12)		Iron-Manga				•	s of hydrophytic vegetation and
_	airie Redox (A16) (N	-		, ,	-	, U)		hydrology must be present,
	ucky Mineral (S1) (L	.RR O, S)	Delta Ochric				unless o	disturbed or problematic.
_	leyed Matrix (S4)		Reduced Ve					
	edox (S5)		Piedmont F	•		-	•	
_	Matrix (S6)		Anomalous	Bright Loar	ny Solis (F20) (MILKA	A 149A, 153C, 153	(0)
	face (S7) (LRR P, S							
	ayer (if observed):							
Туре:			_					
Depth (inc	hes):		_				Hydric Soll Pre	sent? Yes No
Remarks:								
Soil pit dug t	o 18 inches. No hy	dric soil indi	cators were obse	rved.				
, ,	,	5						

Project/Site: Hill Tide Estates	City/County: _Lee	Sampling Date: 12/11/15	5
Applicant/Owner: Seagate Development Group, LLC		State: FL Sampling Point: 3	
Investigator(s): Mike Myers		ection 26, Township 43 East, Range 20 South	
Landform (hillslope, terrace, etc.): Flat		none); None Slope (%): 0-2	2
Subregion (LRR or MLRA): LRRU Lat: 26.7		82.260613 Datum: Decimal	
Soil Map Unit Name: St. Augustine Sand	Long.	NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time of	vear? Yes ✓ No	(If no, explain in Remarks.)	
Are Vegetation Yes, Soil No, or Hydrology No significan		Circumstances" present? Yes No	
Are Vegetation NO, Soil NO, or Hydrology NO naturally		explain any answers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map showing	ng sampling point location	ns, transects, important features,	etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Yes No Y No	Is the Sampled Area		
Wetland Hydrology Present? Yes No	within a Wetland?	Yes No Y	
Remarks:			
Area is periodically mowed.			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two requir	ed)
Primary Indicators (minimum of one is required; check all that appl	v)	Surface Soil Cracks (B6)	-
Surface Water (A1) Aquatic Fauna (I		Sparsely Vegetated Concave Surface (B	18)
High Water Table (A2) Marl Deposits (B	·	Drainage Patterns (B10)	·
Saturation (A3) Hydrogen Sulfid	e Odor (C1)	Moss Trim Lines (B16)	
Water Marks (B1) Oxidized Rhizos	pheres along Living Roots (C3)	Dry-Season Water Table (C2)	
Sediment Deposits (B2)	luced Iron (C4)	Crayfish Burrows (C8)	
	uction in Tilled Soils (C6)	Saturation Visible on Aerial Imagery (C9))
Algal Mat or Crust (B4) Thin Muck Surfa	, ,	Geomorphic Position (D2)	
Iron Deposits (B5) Other (Explain in	Remarks)	Shallow Aquitard (D3) FAC-Neutral Test (D5)	
Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)		Sphagnum moss (D8) (LRR T, U)	
Field Observations:		Opriagram moss (DO) (Enter)	
Surface Water Present? Yes No Depth (inch	es);N/A		
Water Table Present? Yes No Depth (inch	es): <u>> 18</u>		
Saturation Present? Yes No Depth (inch	es): N/A Wetland I	lydrology Present? Yes No _✓	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial ph	otos, previous inspections), if ava	ilable:	
Remarks:			
No hydrologic indicators were observed.			
10			

	Absolute	Dominant	Indicator	Dominance Test v	worksheet:		
Tree Stratum (Plot size: 30 foot radius) 1. N/A	% Cover			Number of Domina That Are OBL, FAC		1	_ (A)
2.				Total Number of D			
				Species Across All		2	_ (B)
·				December of December of	-4 Oi		70
5				Percent of Domina That Are OBL, FAC		0.5	(A/E
S							``
				Prevalence Index			
						Multiply by:	
		= Total Co	ver	OBL species			
50% of total cover:	20% of	total cover	:	FACW species			
Sapling/Shrub Stratum (Plot size: 30 foot radius)				FAC species			
. <u>N/A</u>				FACU species			
				UPL species			
•				Column Totals:	(A	.)	(B
·				Prevalence in	ndev = R/A =		
				Hydrophytic Vege			_
				1 - Rapid Test			
				2 - Dominance		-	
				3 - Prevalence			
						getation ¹ (Expla	nin\
50% of total cover:	20% of	total cover		Floblematic H	yuropriyuc ve	getation (Expir	all ()
				1,			
lerb Stratum (Plot size: 30 foot radius)				¹ Indicators of hydric	c soil and wet	land hydrology	must
lerb Stratum (Plot size: 30 foot radius) Cynodon dactylon	40	Yes	FACU	be present, unless	disturbed or p	roblematic.	must
lerb Stratum (Plot size: 30 foot radius) Cynodon dactylon Bidens pilosa	40	Yes Yes	FACU FAC	¹ Indicators of hydribe present, unless Definitions of Fou	disturbed or p	roblematic.	must
Cynodon dactylon Bidens pilosa Sporobolis indicus	40 30 15	Yes Yes No	FACU FACU	Definitions of Four	disturbed or pur Vegetation onto, excluding	oroblematic. Strata: vines, 3 in. (7.6	cm)
erb Stratum (Plot size: 30 foot radius) Cynodon dactylon Bidens pilosa Sporobolis indicus Spermacoce remota	40 30 15 10	Yes Yes No	FACU FACU UPL	Definitions of Fou Tree – Woody plan more in diameter a	disturbed or pur Vegetation onto, excluding	oroblematic. Strata: vines, 3 in. (7.6	cm)
Cynodon dactylon Bidens pilosa Sporobolis indicus Spermacoce remota Fimbristylis cymosa	40 30 15 10 5	Yes Yes No No	FACU FAC FACU UPL FAC	Definitions of Fou Tree – Woody plar more in diameter a height.	disturbed or pur Vegetation onts, excluding the breast heigh	oroblematic. Strata: vines, 3 in. (7.6 t (DBH), regard	om)
Cynodon dactylon Bidens pilosa Sporobolis indicus Spermacoce remota Fimbristylis cymosa	40 30 15 10 5	Yes Yes No No No	FACU FACU UPL FAC	Definitions of Four Tree – Woody plan more in diameter a height. Sapling/Shrub – V	disturbed or pur Vegetation ats, excluding the breast heighthe vegetation.	strata: vines, 3 in. (7.6 t (DBH), regard	cm) dless
Cynodon dactylon Bidens pilosa Sporobolis indicus Spermacoce remota Fimbristylis cymosa	40 30 15 10 5	Yes Yes No No No	FACU FACU UPL FAC	Definitions of Fou Tree – Woody plar more in diameter a height.	disturbed or pur Vegetation ats, excluding the breast heighthe vegetation.	strata: vines, 3 in. (7.6 t (DBH), regard	cm) dless
lerb Stratum (Plot size: 30 foot radius) Cynodon dactylon Bidens pilosa Sporobolis indicus Spermacoce remota Fimbristylis cymosa	40 30 15 10 5	Yes Yes No No No	FACU FAC FACU UPL FAC	Definitions of Four Tree – Woody plan more in diameter a height. Sapling/Shrub – W than 3 in. DBH and Herb – All herbace	disturbed or pur Vegetation hts, excluding the breast height voody plants, if greater than the cous (non-woods).	oroblematic. Strata: vines, 3 in. (7.6 t (DBH), regard excluding vines 3.28 ft (1 m) tall dy) plants, regions.	cm) dless s, les
lerb Stratum (Plot size: 30 foot radius) Cynodon dactylon Bidens pilosa Sporobolis indicus Spermacoce remota Fimbristylis cymosa	40 30 15 10 5	Yes Yes No No No	FACU FAC FACU UPL FAC	Definitions of Four Tree – Woody plan more in diameter a height. Sapling/Shrub – W than 3 in. DBH and	disturbed or pur Vegetation hts, excluding the breast height voody plants, if greater than the cous (non-woods).	oroblematic. Strata: vines, 3 in. (7.6 t (DBH), regard excluding vines 3.28 ft (1 m) tall dy) plants, regions.	cm) dless d s, less
lerb Stratum (Plot size: 30 foot radius) Cynodon dactylon Bidens pilosa Sporobolis indicus Spermacoce remota Fimbristylis cymosa	40 30 15 10 5	Yes Yes No No No	FACU FAC FACU UPL FAC	Definitions of Four Tree – Woody plan more in diameter a height. Sapling/Shrub – V than 3 in. DBH and Herb – All herbace of size, and woody Woody vine – All v	disturbed or part Vegetation ats, excluding the breast height Voody plants, if greater than the cous (non-woody plants less the coust of the coust	oroblematic. Strata: vines, 3 in. (7.6 t (DBH), regard excluding vines 3.28 ft (1 m) tal ddy) plants, regard an 3.28 ft tall.	ocm) dless (s, less ll.
Cynodon dactylon Bidens pilosa Sporobolis indicus Spermacoce remota Fimbristylis cymosa	40 30 15 10 5	Yes Yes No No No	FACU FAC FACU UPL FAC	Definitions of Four Tree – Woody plan more in diameter a height. Sapling/Shrub – V than 3 in. DBH and Herb – All herbace of size, and woody	disturbed or part Vegetation ats, excluding the breast height Voody plants, if greater than the cous (non-woody plants less the coust of the coust	oroblematic. Strata: vines, 3 in. (7.6 t (DBH), regard excluding vines 3.28 ft (1 m) tal ddy) plants, regard an 3.28 ft tall.	ocm) dless (s, less ll.
lerb Stratum (Plot size: 30 foot radius) Cynodon dactylon Bidens pilosa Sporobolis indicus Spermacoce remota Fimbristylis cymosa	40 30 15 10 5	Yes Yes No No No	FACU FACU UPL FAC	Definitions of Four Tree – Woody plan more in diameter a height. Sapling/Shrub – V than 3 in. DBH and Herb – All herbace of size, and woody Woody vine – All v	disturbed or part Vegetation ats, excluding the breast height Voody plants, if greater than the cous (non-woody plants less the coust of the coust	oroblematic. Strata: vines, 3 in. (7.6 t (DBH), regard excluding vines 3.28 ft (1 m) tal addy) plants, regard an 3.28 ft tall.	ocm) dless d s, less ll. ardles
Perb Stratum (Plot size: 30 foot radius) Cynodon dactylon Bidens pilosa Sporobolis indicus Spermacoce remota Fimbristylis cymosa 0	40 30 15 10 5	Yes Yes No No No	FACU FACU UPL FAC	Definitions of Four Tree – Woody plan more in diameter a height. Sapling/Shrub – V than 3 in. DBH and Herb – All herbace of size, and woody Woody vine – All v	disturbed or part Vegetation ats, excluding the breast height Voody plants, if greater than the cous (non-woody plants less the coust of the coust	oroblematic. Strata: vines, 3 in. (7.6 t (DBH), regard excluding vines 3.28 ft (1 m) tal addy) plants, regard an 3.28 ft tall.	ocm) dless (s, less ll.
lerb Stratum (Plot size: 30 foot radius) Cynodon dactylon Bidens pilosa Sporobolis indicus Spermacoce remota Fimbristylis cymosa	40 30 15 10 5	Yes Yes No No No	FACU FAC UPL FAC	Definitions of Four Tree – Woody plan more in diameter a height. Sapling/Shrub – V than 3 in. DBH and Herb – All herbace of size, and woody Woody vine – All v	disturbed or part Vegetation ats, excluding the breast height Voody plants, if greater than the cous (non-woody plants less the coust of the coust	oroblematic. Strata: vines, 3 in. (7.6 t (DBH), regard excluding vines 3.28 ft (1 m) tal addy) plants, regard an 3.28 ft tall.	ocm) dless (s, less ll.
lerb Stratum (Plot size: 30 foot radius) Cynodon dactylon Bidens pilosa Sporobolis indicus Spermacoce remota Fimbristylis cymosa 0	40 30 15 10 5	Yes Yes No No No Total Con	FACU FAC UPL FAC	Definitions of Four Tree – Woody plan more in diameter a height. Sapling/Shrub – V than 3 in. DBH and Herb – All herbace of size, and woody Woody vine – All v	disturbed or part Vegetation ats, excluding the breast height Voody plants, if greater than the cous (non-woody plants less the coust of the coust	oroblematic. Strata: vines, 3 in. (7.6 t (DBH), regard excluding vines 3.28 ft (1 m) tal addy) plants, regard an 3.28 ft tall.	ocm) dless d s, less ll. ardles
lerb Stratum (Plot size: 30 foot radius) Cynodon dactylon Bidens pilosa Sporobolis indicus Spermacoce remota Fimbristylis cymosa 0	40 30 15 10 5	Yes Yes No No No Total Con	FACU FAC UPL FAC	Definitions of Four Tree – Woody plan more in diameter a height. Sapling/Shrub – V than 3 in. DBH and Herb – All herbace of size, and woody Woody vine – All v	disturbed or part Vegetation ats, excluding the breast height Voody plants, if greater than the cous (non-woody plants less the coust of the coust	oroblematic. Strata: vines, 3 in. (7.6 t (DBH), regard excluding vines 3.28 ft (1 m) tal addy) plants, regard an 3.28 ft tall.	ocm) dless (s, less ll.
lerb Stratum (Plot size:30 foot radius) Cynodon dactylon Bidens pilosa Sporobolis indicus Spermacoce remota Fimbristylis cymosa 0	40 30 15 10 5	Yes Yes No No No Total Con	FACU FAC UPL FAC	Definitions of Four Tree – Woody plan more in diameter a height. Sapling/Shrub – V than 3 in. DBH and Herb – All herbace of size, and woody Woody vine – All v	disturbed or part Vegetation ats, excluding the breast height Voody plants, if greater than the cous (non-woody plants less the coust of the coust	oroblematic. Strata: vines, 3 in. (7.6 t (DBH), regard excluding vines 3.28 ft (1 m) tal addy) plants, regard an 3.28 ft tall.	ocm) dless (s, less ll.
lerb Stratum (Plot size: 30 foot radius) Cynodon dactylon Bidens pilosa Sporobolis indicus Spermacoce remota Fimbristylis cymosa 0	40 30 15 10 5	Yes Yes No No No Total Con	FACU FAC UPL FAC	Definitions of Four Tree – Woody plan more in diameter a height. Sapling/Shrub – V than 3 in. DBH and Herb – All herbace of size, and woody Woody vine – All v	disturbed or part Vegetation ats, excluding the breast height Voody plants, if greater than the cous (non-woody plants less the coust of the coust	oroblematic. Strata: vines, 3 in. (7.6 t (DBH), regard excluding vines 3.28 ft (1 m) tal addy) plants, regard an 3.28 ft tall.	ocm) dless (s, less ll.
Sporobolis indicus Spermacoce remota Fimbristylis cymosa 0	40 30 15 10 5	Yes Yes No No No Total Con	FACU FAC UPL FAC	Definitions of Four Tree – Woody plan more in diameter a height. Sapling/Shrub – V than 3 in. DBH and Herb – All herbace of size, and woody Woody vine – All v	disturbed or part Vegetation ats, excluding the breast height Voody plants, if greater than the cous (non-woody plants less the coust of the coust	oroblematic. Strata: vines, 3 in. (7.6 t (DBH), regard excluding vines 3.28 ft (1 m) tal addy) plants, regard an 3.28 ft tall.	ocm) dless d s, less ll. ardles
Sporobolis indicus Spermacoce remota Fimbristylis cymosa 0	40 30 15 10 5	Yes Yes No No No Total Con	FACU FAC UPL FAC	be present, unless Definitions of Four Tree – Woody plan more in diameter a height. Sapling/Shrub – Verthan 3 in. DBH and Herb – All herbace of size, and woody Woody vine – All veright.	disturbed or part Vegetation ats, excluding the breast height Voody plants, if greater than the cous (non-woody plants less the coust of the coust	oroblematic. Strata: vines, 3 in. (7.6 t (DBH), regard excluding vines 3.28 ft (1 m) tal addy) plants, regard an 3.28 ft tall.	ocm) dless (s, less ll.
terb Stratum (Plot size:30 foot radius) Cynodon dactylon Bidens pilosa Sporobolis indicus Spermacoce remota Fimbristylis cymosa	40 30 15 10 5	Yes Yes No No No Total Cover	FACU FAC UPL FAC FAC 20	Definitions of Four Tree – Woody plan more in diameter a height. Sapling/Shrub – V than 3 in. DBH and Herb – All herbace of size, and woody Woody vine – All v	disturbed or part Vegetation ats, excluding the breast height Voody plants, if greater than the cous (non-woody plants less the coust of the coust	oroblematic. Strata: vines, 3 in. (7.6 t (DBH), regard excluding vines 3.28 ft (1 m) tal addy) plants, regard an 3.28 ft tall.	ocm) dless (s, less ll.
Spermacoce remota Fimbristylis cymosa 0	40 30 15 10 5	Yes Yes No No No Total Covertotal cover	FACU FAC UPL FAC FAC Ver 20	be present, unless Definitions of Four Tree – Woody plan more in diameter a height. Sapling/Shrub – Vithan 3 in. DBH and Herb – All herbace of size, and woody Woody vine – All vineight. Hydrophytic	disturbed or part Vegetation ats, excluding the breast height Voody plants, if greater than the cous (non-woody plants less the coust of the coust	oroblematic. Strata: vines, 3 in. (7.6 t (DBH), regard excluding vines 3.28 ft (1 m) tal addy) plants, regard an 3.28 ft tall.	ocm) dless (s, less ll.
Sporobolis indicus Spermacoce remota Fimbristylis cymosa 0	40 30 15 10 5 100 20% of	Yes Yes No No No Total Cover	FACU FAC UPL FAC FAC Ver 20	be present, unless Definitions of Four Tree – Woody plan more in diameter a height. Sapling/Shrub – Withan 3 in. DBH and Herb – All herbace of size, and woody Woody vine – All wheight. Hydrophytic Vegetation	disturbed or par Vegetation ats, excluding the breast height Woody plants, if greater than the cous (non-woody plants less the woody vines greater than the coust of the cou	oroblematic. Strata: vines, 3 in. (7.6 t (DBH), regard excluding vines 3.28 ft (1 m) tall dy) plants, region 3.28 ft tall. reater than 3.2	ocm) dless (s, less ll.

	2
Sampling Point:	- 3

epth <u>Matrix</u>			Features				
nches) Color (moist)		Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
0-4 10 YR 1/2							
4-10+ 10 YR 6/3							
ype: C=Concentration, D=Deple ydric Soll Indicators: (Applica		ls, unless other	wise note	d.)		Indicators for F	Pore Lining, M=Matrix. Problematic Hydric Soils ³ :
Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, 5 cm Mucky Mineral (A7) (LR Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface Thick Dark Surface (A12) Coast Prairie Redox (A16) (M Sandy Mucky Mineral (S1) (LI Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S,	(A11) [LRA 150A) [RR O, S) [Polyvalue Bel Thin Dark Sui Loamy Mucky Loamy Gleye Depleted Mat Redox Dark S Depleted Dari Redox Depre Mari (F10) (Li Depleted Och Iron-Mangane Umbric Surfa Delta Ochric (Reduced Veri Piedmont Flo Anomalous Bi	rface (S9) / Mineral (d Matrix (I rix (F3) Surface (F6 k Surface ssions (F6 RR U) hric (F11) (ese Masse ce (F13) (I (F17) (ML tic (F18) (I odplain Se	(LRR S, F1) (LRR F2) 6) (F7) b) (MLRA 15 es (F12) (I LRR P, T, RA 151) MLRA 15	T, U) O) ERR O, P, 1 U) OA, 150B) (MLRA 149	2 cm Muck Reduced Ve Piedmont F Anomalous (MLRA 1: Red Parent Very Shallo Other (Explain) 3Indicators wetland unless d	Material (TF2) w Dark Surface (TF12) ain in Remarks) of hydrophytic vegetation and hydrology must be present, sturbed or problematic.
estrictive Layer (if observed): Type:	1, 0,						
Depth (inches):		a X				Hydric Soil Pres	ent? Yes No ✓
oil pit dug to 18 inches. No hyd	ric soil indicat	tors were observ	ved.				

Project/Site: Hill Tide Estates	City/County:_Lee		Sampling Date: 12/11/15
Applicant/Owner: Seagate Development Group, LLC			Sampling Point: 4
	Section, Township	, Range: Section 26, Townsh	ip 43 East, Range 20 South
			Slope (%):0-2
Subregion (LRR or MLRA): LRRU	t: 26.71863	Long:82.259468	Datum: Decimal Degrees
Soil Map Unit Name: St. Augustine Sand		NWI classifi	cation:
Are climatic / hydrologic conditions on the site typical for this	time of year? Yes	No (If no, explain in f	Remarks.)
Are Vegetation $\underline{N0}$, Soil $\underline{N0}$, or Hydrology $\underline{N0}$ signal $\underline{N0}$	nificantly disturbed?	Are "Normal Circumstances"	present? Yes ✓ No
Are Vegetation \underline{NO} , Soil \underline{NO} , or Hydrology \underline{NO} na	turally problematic?	(If needed, explain any answ	ers in Remarks.)
SUMMARY OF FINDINGS - Attach site map s	howing sampling poi	nt locations, transect	s, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks:	within a W	·	No 🗸
TOTAL STATE OF THE		8	
HYDROLOGY			
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Water Table Present? Marl Dep Hydroger Avidized Presence Recent In Thin Muc Other (Ex Other (Ex) Dept Water Table Present? Yes No Dept Vacanta Dept Yes No Dept Vacanta Dept No Dept Vacanta Dept Vacanta Dept Vacanta Dept Vacanta Dept Vacanta Dept Vacanta Dept No Dept Vacanta Dept Vac	auna (B13) osits (B15) (LRR U) I Sulfide Odor (C1) Rhizospheres along Living R of Reduced Iron (C4) on Reduction in Tilled Soils (IX) IX Surface (C7) IX I	Surface Soi Sparsely Ve Drainage Pa Moss Trim I Coots (C3) Dry-Season Crayfish Bu Geomorphic Shallow Aqu FAC-Neutra Sphagnum Wetland Hydrology Prese	Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) c Position (D2) uitard (D3) il Test (D5) moss (D8) (LRR T, U)

vegeration (Four Strata) – Ose scientific nar	nes or pr	ants.		Sampi	ling Point:			
To an a second s		Dominant		Dominance Test worksheet:				
Tree Stratum (Plot size: 30 foot radius)		Species?		Number of Dominant Species				
1. Casuarina equisetifolia	90	Yes	FACU	That Are OBL, FACW, or FAC:	1	(A)		
2				Total Number of Dominant				
3				Species Across All Strata:	5	(B)		
4				opesies / tol 055 / til Otlata.		_ (D)		
				Percent of Dominant Species	0.0			
5				That Are OBL, FACW, or FAC:	0.2	_ (A/B)		
6				Prevalence Index worksheet:				
7								
8				Total % Cover of:				
		= Total Co	/er	OBL species x	1 =			
50% of total cover: 45 20% of total cover: 18			FACW species x:	2 =				
	20 % 01	total cover		FAC species x	3 =			
Sapling/Shrub Stratum (Plot size: 30 foot radius)				FACU species x				
1. Casuarina equisetifolia	30	Yes	_FACU_			_		
2. Schinus terebinthifolius	30	Yes	FAC_	UPL species x :				
3				Column Totals:(A)	(B)		
4.								
				Prevalence Index = B/A =				
5				Hydrophytic Vegetation Indicat	tors:			
6.				1 - Rapid Test for Hydrophyt	ic Vegetation			
7				2 - Dominance Test is >50%				
8				3 - Prevalence Index is ≤3.01	_			
	60	= Total Cov						
570/ of total across 30				Problematic Hydrophytic Veg	jetation (Expl	ain)		
50% of total cover: 30	_ 20% or	total cover						
Herb Stratum (Plot size: 30 foot radius)				Indicators of hydric soil and wetle	and hydrology	must		
1. Cupaniopsis anacardioides	2	Yes	UPL	be present, unless disturbed or p				
2. Coccoloba uvifera	1	Yes	FACU	Definitions of Four Vegetation	Strata:			
3								
				Tree - Woody plants, excluding				
4				more in diameter at breast height	i (DBH), regard	iless of		
5				height.				
6				Sapling/Shrub - Woody plants,	excludina vine	s. less		
7				than 3 in. DBH and greater than 3				
8								
				Herb - All herbaceous (non-wood		ardless		
9				of size, and woody plants less that	an 3,∠8π tall.			
10				Woody vine - All woody vines gr	reater than 3.2	8 ft in		
11				height.				
12								
	3 :	= Total Cov	or.					
500/ 555-4-1 15								
50% of total cover:1.5	_ 20% or	total cover		1				
Woody Vine Stratum (Plot size:30 foot radius)								
1. <u>N/A</u>								
2								
3								
4								
4.								
5				Hydrophytic				
	=	Total Cov	ег	Vegetation	[7]			
50% of total cover:	20% of	total cover:		Present? Yes	No _ ✓			
Remarks: (If observed, list morphological adaptations below	_							
Remarks. (If observed, list morphological adaptations below).								
Vegetation does not meet hydrophytic vegetation criteria.								
Đ								

SOIL				Sampling Point: 4
Profile Desc	ription: (Describe to the de	epth needed to document the indicator or	confirm the absence o	
Depth	Matrix	Redox Features		•
(inches)	Color (moist) %	Color (moist) % Type ¹ I	<u>oc² Texture</u> _	Remarks
0-12+	10 YR 6/2100			
				-
				*
		-2		
		M=Reduced Matrix, MS=Masked Sand Grains		L=Pore Lining, M=Matrix.
	, , ,	Il LRRs, unless otherwise noted.)		or Problematic Hydric Solls ³ :
Histosol Histosol	(A1) pipedon (A2)	Polyvalue Below Surface (S8) (LRR Thin Dark Surface (S9) (LRR S, T, I		ck (A9) (LRR O) ck (A10) (LRR S)
Black Hi	. , ,	Loamy Mucky Mineral (F1) (LRR O)	. —	Vertic (F18) (outside MLRA 150A,B)
	n Sulfide (A4)	Loamy Gleyed Matrix (F2)		it Floodplain Soils (F19) (LRR P, S, T)
	l Layers (A5)	Depleted Matrix (F3)	V-1	ous Bright Loamy Soils (F20)
	Bodies (A6) (LRR P, T, U)	Redox Dark Surface (F6)		(TE2)
()	icky Mineral (A7) (LRR P, T, l esence (A8) (LRR U)	U) Depleted Dark Surface (F7) Redox Depressions (F8)		ent Material (TF2) allow Dark Surface (TF12)
	ck (A9) (LRR P, T)	Mari (F10) (LRR U)		xplain in Remarks)
	Below Dark Surface (A11)	Depleted Ochric (F11) (MLRA 151)		
	rk Surface (A12)	Iron-Manganese Masses (F12) (LRI		ors of hydrophytic vegetation and
	airie Redox (A16) (MLRA 1 5) lucky Mineral (S1) (LRR O, S			nd hydrology must be present, s disturbed or problematic.
	illeyed Matrix (S4)	Reduced Vertic (F18) (MLRA 150A,		s disturbed or problematic.
	edox (S5)	Piedmont Floodplain Soils (F19) (MI		
Stripped	Matrix (S6)	Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 1	53D)
1700000	face (S7) (LRR P, S, T, U)			
	.ayer (if observed):			
Type:	sh + + \.		15-44- 0-11 B	
Depth (ind	cnes):		Hydric Soil P	resent? Yes No V
Remarks:				
Soil pit was	dug to 18 inches. No hydric	soil indicators were observed.		