



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): 31 October 2019

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:SAJ-RD-SP, BHT Jurisdictional Determination, SAJ-2019-01815(JD-RHF)

C. PROJECT LOCATION AND BACKGROUND INFORMATION: The project is a 25.1 acre parcel located adjacent to 3800 Selvitz Road, Section 32, Township 35 South, Range 40 East, Fort Pierce, Florida. The site is a part formerly permitted citrus farming facility (FDEP File No: FLA140392). The site is adjacent to Ten Mile Creek. St. Lucie County Property Control Number 2432-122-0001-000-5.

State: Florida County/parish/borough: St. Lucie City: Fort Pierce
Center coordinates of site (lat/long in degree decimal format): Lat. 27.395170° N, Long. -80.358591° W.
Universal Transverse Mercator: 17

Name of nearest waterbody: Ten Mile Creek

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Ten Mile Creek

Name of watershed or Hydrologic Unit Code (HUC): 0309020608 North Fork of the St. Lucie River

[X] 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):

[X] Office (Desk) Determination. Date: 09/19/2019

[X] Field Determination. Date(s): 07/11/2019

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There Are no "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]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply): 1

- [] 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: Wetlands 1 and 2 totaling 6.38 acres.

c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual

Elevation of established OHWM (if known):

2. Non-regulated waters/wetlands (check if applicable):3

[X] Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.

Explain: The site contains five individual aquatic resources: Wetland 1: 1.15 acres; Water 1: 0.09 acres; Water 2: 3.7 acres; Water 3: 1.2 acres; Water 4: 0.04 acres. The entire review area consists of Ankona and Farmington Sand, Susana and Wachula Sands both of which are non-hydric. A site visit was conducted on July 11, 2019 which confirmed

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.

the boundaries and location of the features on site as demonstrated by the agent. The review area was a part of a permit issued on March 19, 2002 (FDEP Permit No: FLA104392) which authorized the creation several ponds and ditches on site as a part of a wastewater treatment system for the citrus grove. The landscape on site has been altered since issuance of that permit, but the remaining aquatic resources on site are part of the designed features of that facility permitted in 2002. Furthermore, a review of historical aerial imagery shows that prior to construction of the permitted facility, the area was not inundated. The 1986 Final Rule for Regulatory Programs of the Corps of Engineers included definitions of waters typically not considered to be waters of the US in Section 328.3. These definitions specified that "non-tidal drainage and irrigation ditches excavated on dry land" and "artificial lakes and ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing" are generally not considered jurisdictional. Since the waters on site were part of a permitted agricultural facility and created entirely from uplands, the Corps has determined that these waters are non-jurisdictional as defined in the 33 CFR 328.3 Pre-ample of the 1986 regulations, and are therefore considered to be non-regulated.

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.

1. TNW

Identify TNW: .

Summarize rationale supporting determination: .

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is “adjacent”: .

B. 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 waterbody⁴ 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.

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

(i) General Area Conditions:

Watershed size: **Pick List**

Drainage area: **Pick List**

Average annual rainfall: inches

Average annual snowfall: inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

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 West.

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):

- | | | |
|--|--|-----------------------------------|
| <input type="checkbox"/> Silts | <input type="checkbox"/> Sands | <input type="checkbox"/> Concrete |
| <input type="checkbox"/> Cobbles | <input type="checkbox"/> Gravel | <input type="checkbox"/> Muck |
| <input type="checkbox"/> Bedrock | <input type="checkbox"/> Vegetation. Type/% cover: | |
| <input type="checkbox"/> 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):

- | | |
|---|---|
| <input type="checkbox"/> Bed and banks | |
| <input type="checkbox"/> OHWM ⁶ (check all indicators that apply): | |
| <input type="checkbox"/> clear, natural line impressed on the bank | <input type="checkbox"/> the presence of litter and debris |
| <input type="checkbox"/> changes in the character of soil | <input type="checkbox"/> destruction of terrestrial vegetation |
| <input type="checkbox"/> shelving | <input type="checkbox"/> the presence of wrack line |
| <input type="checkbox"/> vegetation matted down, bent, or absent | <input type="checkbox"/> sediment sorting |
| <input type="checkbox"/> leaf litter disturbed or washed away | <input type="checkbox"/> scour |
| <input type="checkbox"/> sediment deposition | <input type="checkbox"/> multiple observed or predicted flow events |
| <input type="checkbox"/> water staining | <input type="checkbox"/> abrupt change in plant community |
| <input type="checkbox"/> other (list): | |
| <input type="checkbox"/> Discontinuous OHWM. ⁷ Explain: | |

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

- | | |
|--|--|
| <input type="checkbox"/> High Tide Line indicated by: | <input type="checkbox"/> Mean High Water Mark indicated by: |
| <input type="checkbox"/> oil or scum line along shore objects | <input type="checkbox"/> survey to available datum; |
| <input type="checkbox"/> fine shell or debris deposits (foreshore) | <input type="checkbox"/> physical markings; |
| <input type="checkbox"/> physical markings/characteristics | <input type="checkbox"/> vegetation lines/changes in vegetation types. |
| <input type="checkbox"/> tidal gauges | |
| <input type="checkbox"/> other (list): | |

(iii) **Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain:

Identify specific pollutants, if known:

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. **Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW**

(i) **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:

- Dye (or other) test performed:

(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.

(ii) **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. **Characteristics 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.

For each wetland, specify the following:

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: linear feet width (ft), Or, 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-RPWs⁸ 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 jurisdictional. 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. Impoundments of jurisdictional waters.⁹

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).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH 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: .

Identify water body and summarize rationale supporting determination: .

⁸See Footnote # 3.

⁹To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰Prior 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.

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: .
- Wetlands: acres.

F. NON-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): **Polygons A, B, C, and D are waters that are a part of a permitted storm water management system and were dug from uplands. These waters are not connected to and do not drain any waters of the US. Therefore, the Corps has determined that these waters are non-jurisdictional. .**

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: 4.9 acres. List lakes/ponds: Water 2: 3.7 acres, Water 3: 1.2 acres.
- Other non-wetland waters: 0.13 acres. List type of aquatic resource: Ditches-Water 1: 0.09, Water 4: 0.04.
- Wetlands: 1.15 acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding 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.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
- 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: Two sets of data sheets were prepared during the site visit conducted on 25 March 2019 which identified Wetland 2 and polygon B.
- Corps navigable waters' study: .
- U.S. Geological Survey Hydrologic Atlas: 0309020608 North Fork of the St. Lucie River.
 - 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: NRCS Web Soil Survey retrieved March 11, 2019.
- National wetlands inventory map(s). Cite name: Palustrine: Emergent and Riverine.
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: .
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Aerial imagery provided by agent.
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): Site visit conducted on 07/11/19 where boundaries of agent delineated wetlands were verified. .

B. ADDITIONAL COMMENTS TO SUPPORT JD: The entire review area is associated with a former citrus packaging facility. A permit was issued by Florida Department of Environmental Protection in March 19, 2002 under permit number FDEP Permit No: FLA104392. This permit

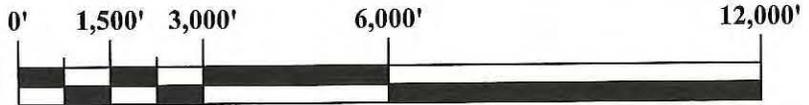
Based on a review of available soil surveys and historic aerials, Wetland 1 and waters 1-4 were created in upland areas. These waters consist of non-tidal drainage and irrigation ditches and irrigation/settling ponds excavated from dry land and artificial lakes created by excavating dry land (polygons A and B). The aquatic features present within the review area are remnants of designed features included in the original 2002 FDEP permit. This was further confirmed on site by the presence of liners protruding from the ground throughout the site. Since the waters onsite were part of a permitted agricultural facility and were created entirely from uplands, Corps has determined that these waters are non-jurisdictional as defined in 33 CFR 328.3 Pre-ample of the 1986 Final Rule for Regulatory Programs of the Army Corps of Engineers, and are therefore considered to be non-regulated.

THIS DRAWING, TOGETHER WITH THE CONCEPTS AND DESIGN PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REFUSE OF AND IMPROPER RELIANCE ON THIS DRAWING WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY HOBE SOUND ENVIRONMENTAL CONSULTANTS, INC. SHALL BE WITHOUT LIABILITY TO HOBE SOUND ENVIRONMENTAL CONSULTANTS, INC.

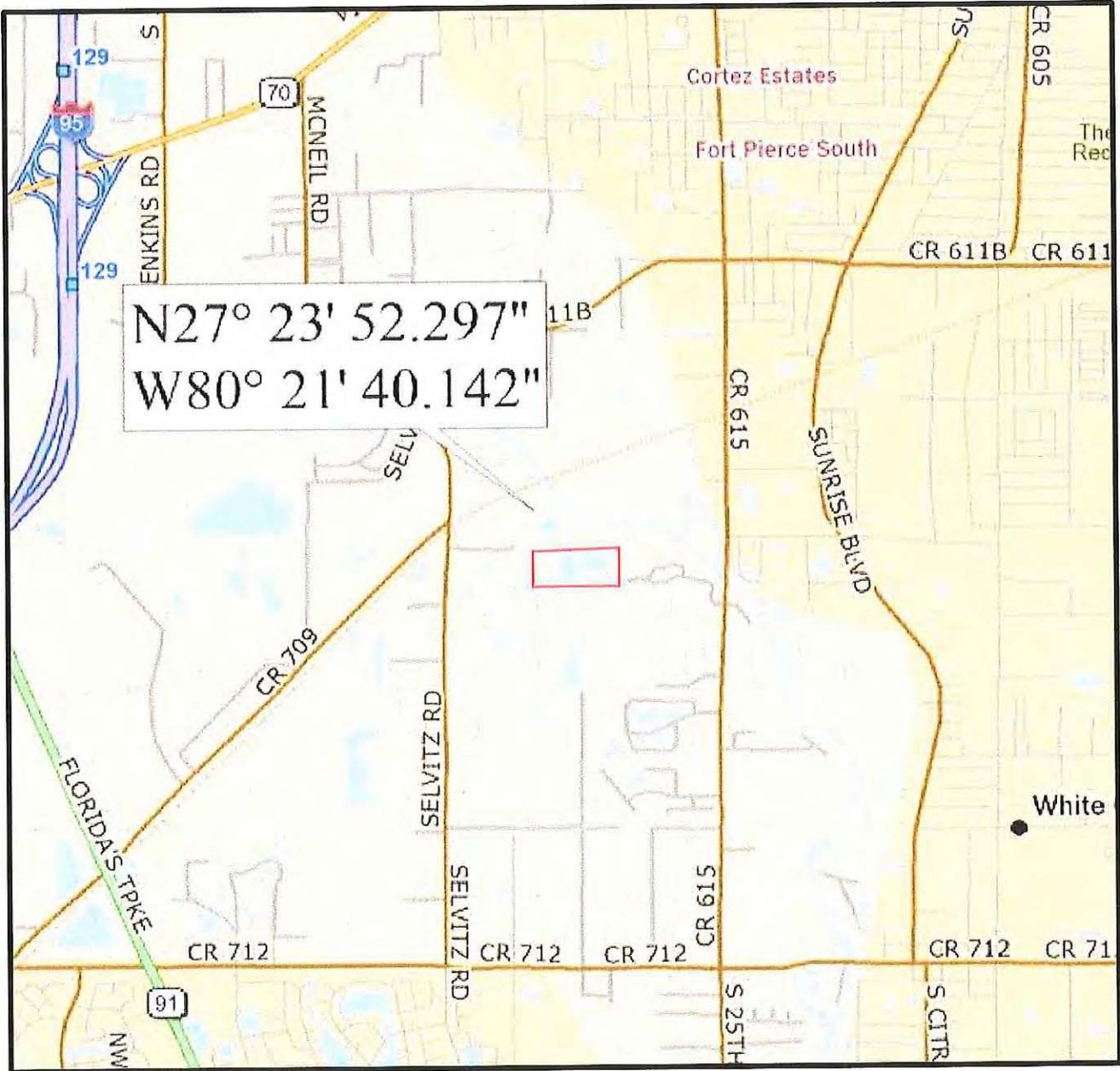
NOT A SURVEY



NORTH



SCALE: 1" = 3,000'



SOURCE: DELORME STREET ATLAS USA, DELUXE

PARCEL ID #: 2432-122-0001-000-5

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 19-007.11	DRAWING NAME: 02 - LOCATION.DWG	DATE: 14 MAY 2019	APPENDIX A FIGURE: 2 OF 14
	32	35S	40E				
LATITUDE: 27°23'52.297"		LONGITUDE: -80°21'40.142"		DESIGNED BY: RLW	DRAWN BY: FRP	CHECKED BY: RLW	

BHT 24
3800 SELVITZ RD, FORT PIERCE, FLORIDA
 APPROVED JURISDICTIONAL DETERMINATION REQUEST
PROJECT LOCATION MAP

Hobe Sound Environmental Consultants Inc.
 9512 SE Duncan Street
 Hobe Sound, FL. 33455
 (772) 545-3676, E-mail: bobhsenv@gmail.com

SAJ-2019-01815

Aquatic Resources Map

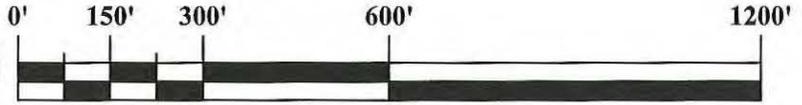
Legend

-  Non-wetland Waters
-  Wetlands

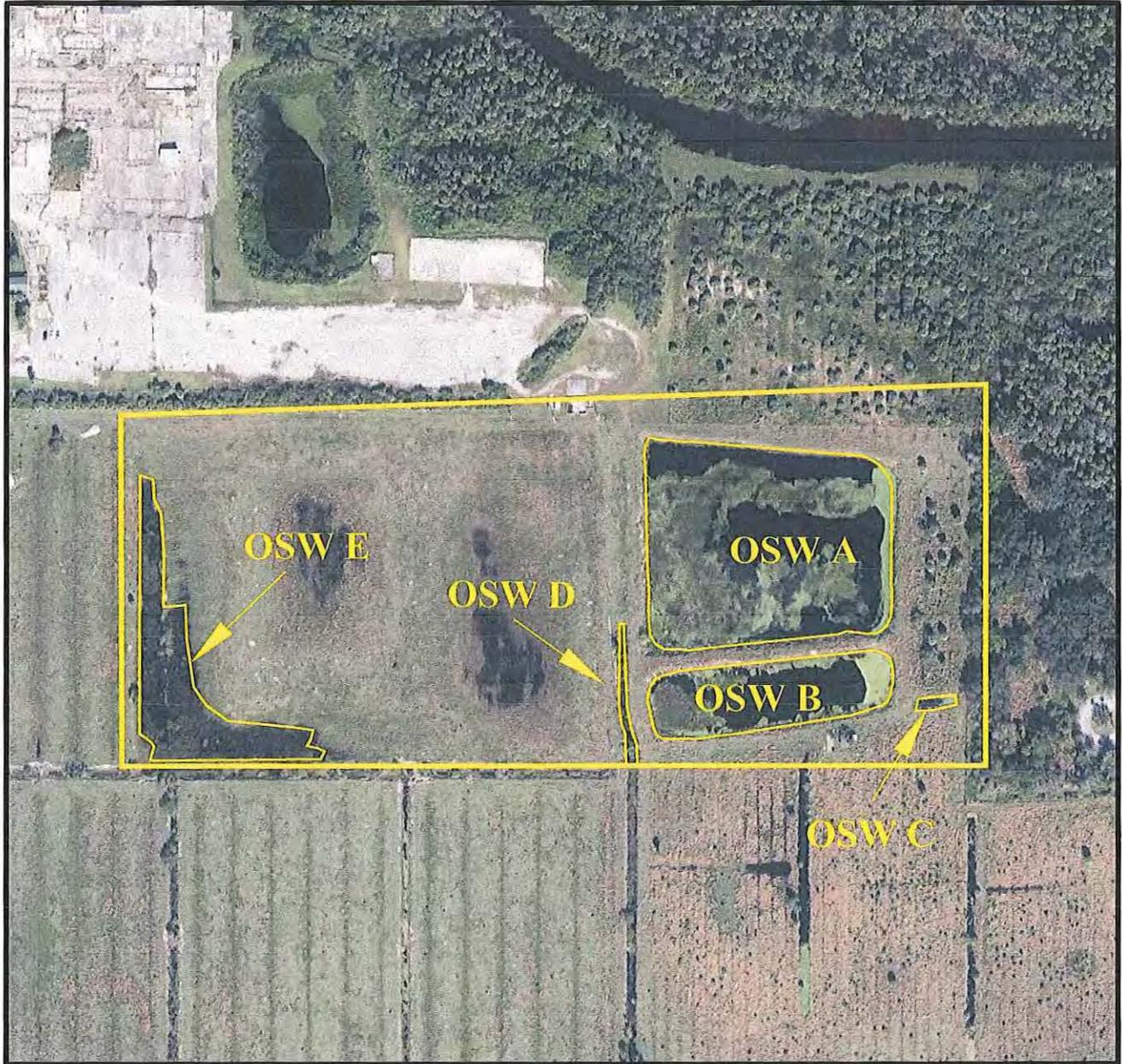


THIS DRAWING, TOGETHER WITH THE CONCEPTS AND DESIGN PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DRAWING WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY HOBE SOUND ENVIRONMENTAL CONSULTANTS, INC. SHALL BE WITHOUT LIABILITY TO HOBE SOUND ENVIRONMENTAL CONSULTANTS, INC.

NOT A SURVEY



SCALE: 1" = 300'



SOURCE: 2018 AERIAL PHOTOGRAPH, FDOT

PARCEL ID #: 2432-122-0001-000-5

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 19-007.11	DRAWING NAME: 03 - 2018 AERIAL.DWG	DATE: 14 MAY 2019	APPENDIX A FIGURE: 3 OF 14
	32	35S	40E				
LATITUDE: 27°23'52.297"		LONGITUDE: -80°21'40.142"		DESIGNED BY: RLW	DRAWN BY: BAR	CHECKED BY: RLW	

BHT 24
3800 SELVITZ RD, FORT PIERCE, FLORIDA
 APPROVED JURISDICTIONAL DETERMINATION REQUEST
2018 AERIAL PHOTOGRAPH

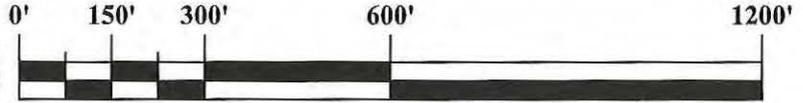
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 9512 SE Duncan Street
 Hobe Sound, FL. 33455
 (772) 545-3676, E-mail: bobhsenv@gmail.com

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NOT A SURVEY



NORTH



SCALE: 1" = 300'



SOURCE: 1992 FDOT ORTHO AERIAL PHOTOGRAPH

PARCEL ID #: 2432-122-0001-000-5

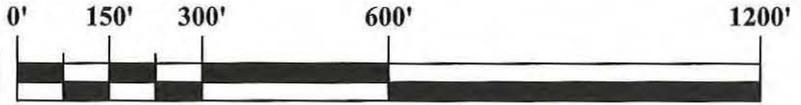
ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.:	DRAWING NAME:	DATE:	APPENDIX A
	32	35S	40E	19-007.11	05 - 1992 AERIAL.DWG	14 MAY 2019	FIGURE: 5 OF 14
LATITUDE: 27°23'52.297"		LONGITUDE: -80°21'40.142"		DESIGNED BY: RLW	DRAWN BY: BAR	CHECKED BY: RLW	

BHT 24
3800 SELVITZ RD, FORT PIERCE, FLORIDA
APPROVED JURISDICTIONAL DETERMINATION REQUEST
1992 HISTORICAL AERIAL PHOTOGRAPH

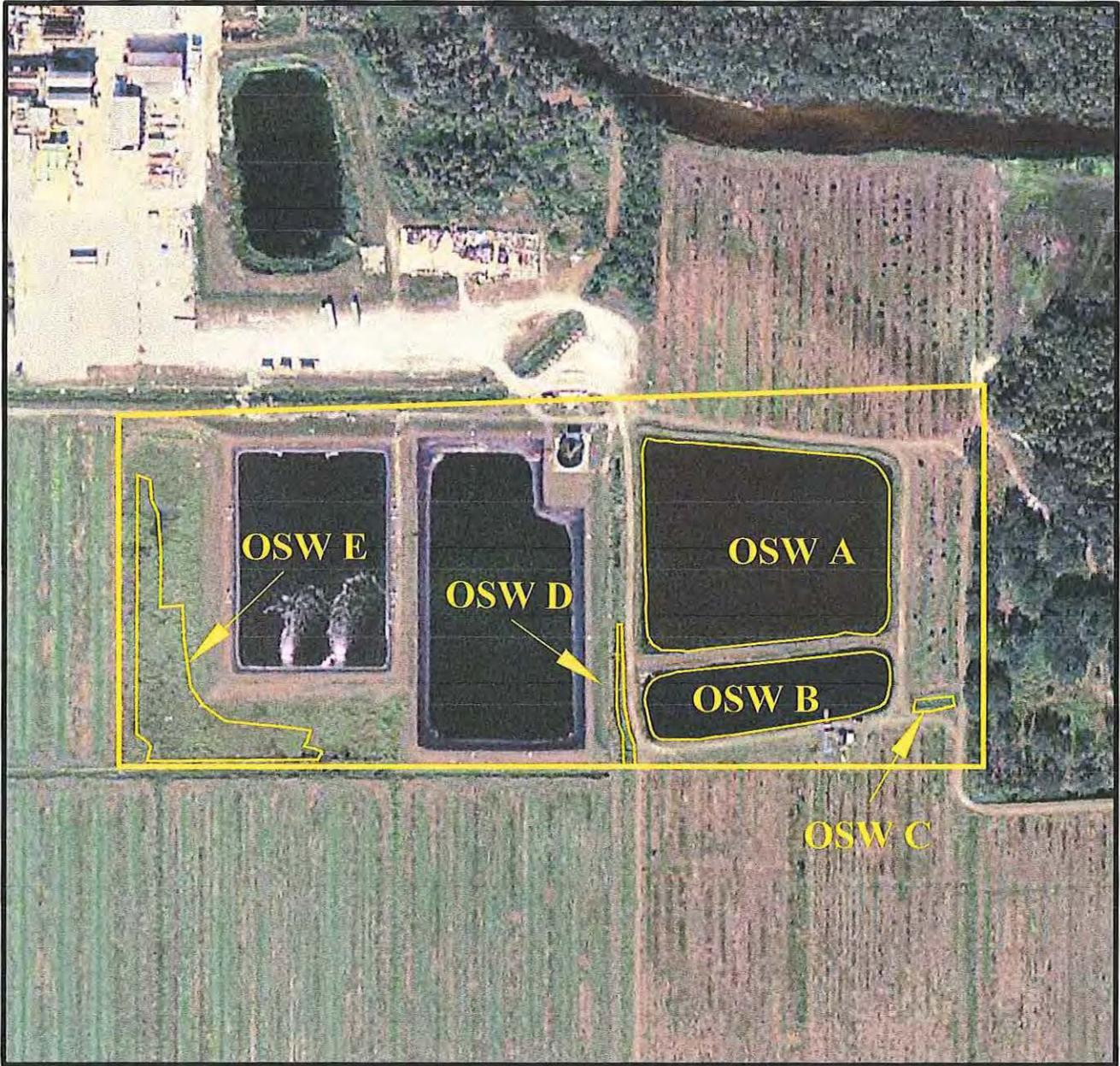
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SCALE: 1" = 300'



SOURCE: ST. LUCIE COUNTY PROPERTY APPRAISERS

PARCEL ID #: 2432-422-0001-000-5

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 19-007.11	DRAWING NAME: 06 - 2004 AERIAL.DWG	DATE: 14 MAY 2019	APPENDIX A FIGURE: 6 OF 14
	32	35S	40E				
LATITUDE: 27°23'52.297"		LONGITUDE: -80°21'40.142"		DESIGNED BY: RLW	DRAWN BY: BAR	CHECKED BY: FRP	

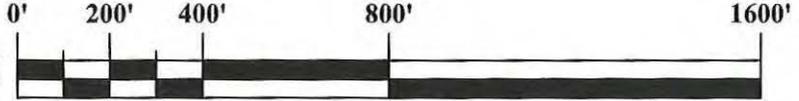
BHT 24
3800 SELVITZ RD, FORT PIERCE, FLORIDA
 APPROVED JURISDICTIONAL DETERMINATION REQUEST
2004 HISTORICAL AERIAL PHOTOGRAPH

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NOT A SURVEY



SCALE: 1" = 400'



February 4, 2019

Wetlands

- Estuarine and Marine Deepwater
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Estuarine and Marine Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

SOURCE: <http://www.fws.gov/wetlands/Data/Mapper.html>

PARCEL ID #: 2432-122-0001-000-5

ST. LUCIE COUNTY FLORIDA	SEC. 32	TWP. 35S	R. 40E	HSE JOB NO.: 19-007.11	DRAWING NAME: 07 - NW1.DWG	DATE: 14 MAY 2019	APPENDIX A FIGURE: 7 OF 14
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LATITUDE: 27°23'52.297"	LONGITUDE: -80°21'40.142"	DESIGNED BY: RLW	DRAWN BY: BAR	CHECKED BY: FRP
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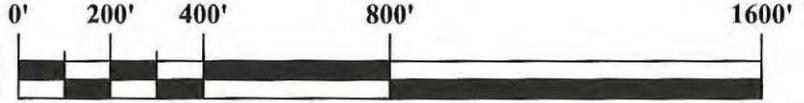
BHT 24
3800 SELVITZ RD, FORT PIERCE, FLORIDA
 APPROVED JURISDICTIONAL DETERMINATION REQUEST
 NATIONAL WETLANDS INVENTORY (NWI) MAP

H
S
E

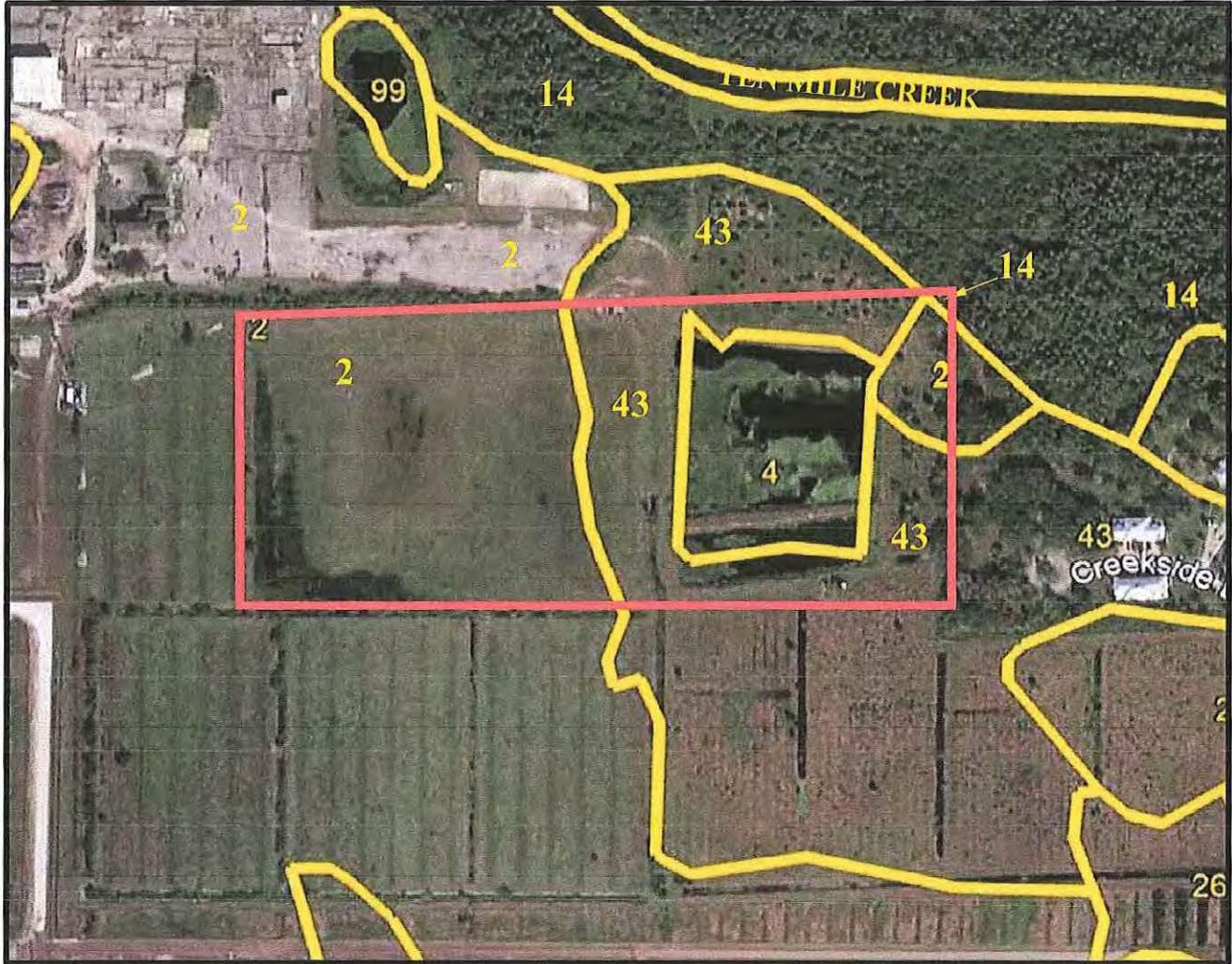
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NOT A SURVEY



SCALE: 1" = 400'



LEGEND

- 2 - ANKONA AND FARMTON SANDS (NOT HYDRIC 0%)
- 4 - ARENTS, 0 TO 5 PERCENT SLOPES (NOT HYDRIC 0%)
- 14 - FLUVAQUENTS, FREQUENTLY FLOODED (HYDRIC, 100%)
- 43 - SUSANNA AND WAUCHULA SANDS (HYDRIC, 1 TO 32%)

SOURCE: <http://websoilsurvey.sc.egov.usda/App/WebSoilSurvey.aspx>

PARCEL ID #: 2432-122-0001-000-5

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.:	DRAWING NAME:	DATE:	APPENDIX A
	32	35S	40E	19-007.11	09 - SOILS.DWG.DWG	14 MAY 2019	FIGURE: 9 OF 14

LATITUDE: 27°23'52.297"	LONGITUDE: -80°21'40.142"	DESIGNED BY: RLW	DRAWN BY: BAR	CHECKED BY: FRP
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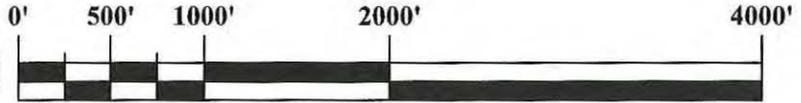
BHT 24
3800 SELVITZ RD, FORT PIERCE, FLORIDA
 APPROVED JURISDICTIONAL DETERMINATION REQUEST
SCS SOILS MAP

H
S
E

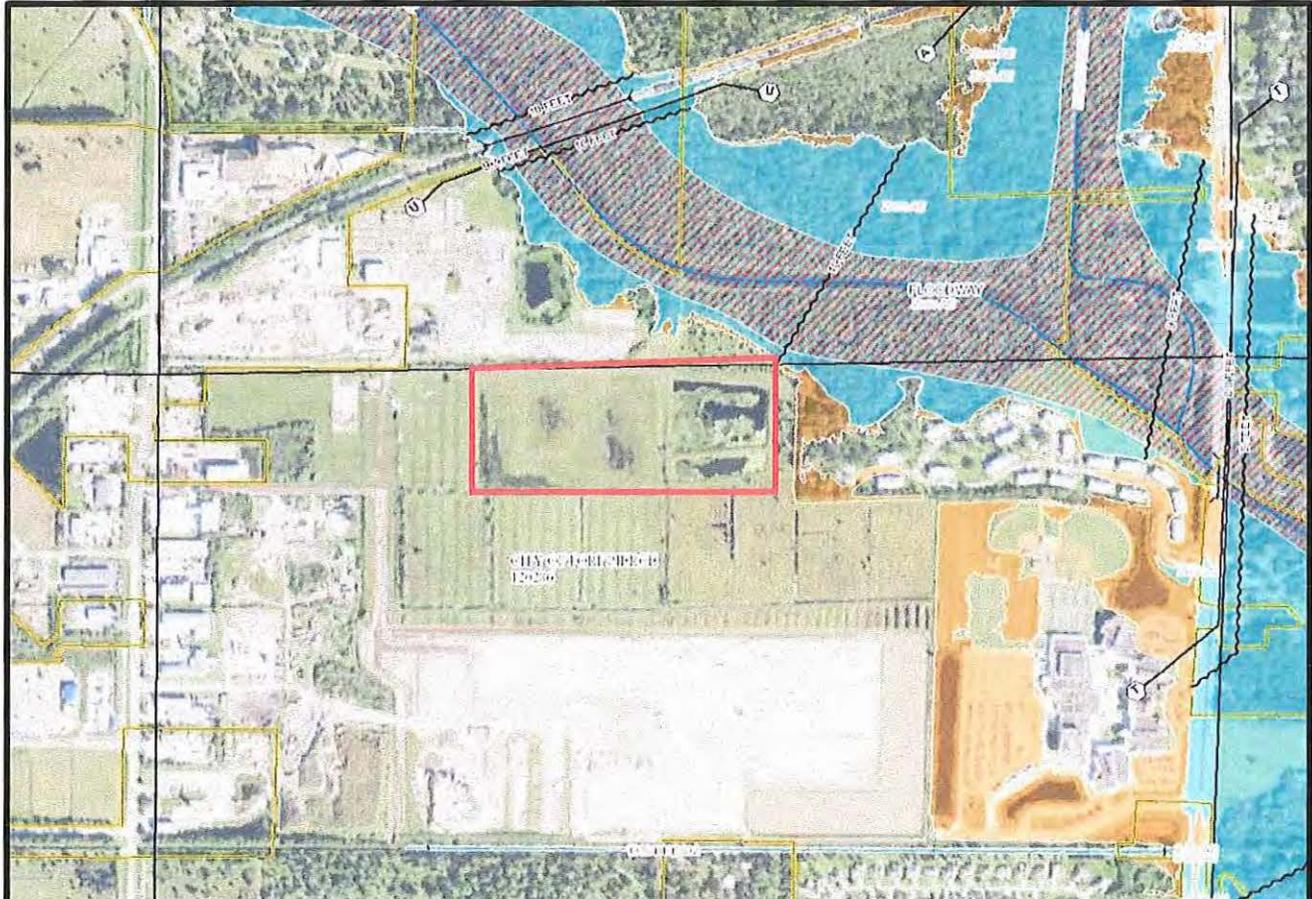
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NOT A SURVEY



SCALE: 1" = 1000'



LEGEND

SPECIAL FLOOD HAZARD AREAS	Without Base Flood Elevation (BFE) (Zone A, V, AE)	OTHER AREAS OF FLOOD HAZARD	Regulatory Floodway	NO SCREEN	Area of Minimal Flood Hazard (Zone X)	OTHER FEATURES	Unit of Study Jurisdiction Boundary
	0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile (Zone B)		Future Conditions 1% Annual Chance Flood Hazard (Zone C)	Area of Unflooded Flood Hazard (Zone D)	GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
	Area with Reduced Flood Risk due to Levee (Zone E)		Area with Flood Risk due to Levee (Zone F)		Levee, Dike, or Floodwall		Canal Transverse
					Canal Transverse Baseline		Canal Transverse Baseline
					Hydrographic Feature		Hydrographic Feature
					Base Flood Elevation Line (BFE)		

SOURCE: <https://msc.fema.gov/portal>

PARCEL ID #: 2432-122-0001-000-5

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 19-007.11	DRAWING NAME: 10 - FEMA.DWG	DATE: 14 MAY 2019	APPENDIX A FIGURE: 10 OF 14
	32	35S	40E				

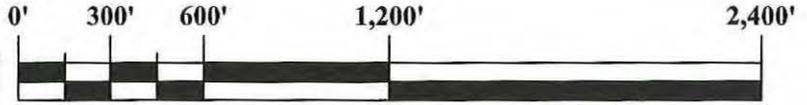
LATITUDE: 27°23'52.297"	LONGITUDE: -80°21'40.142"	DESIGNED BY: RLW	DRAWN BY: BAR	CHECKED BY: RLW
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BHT 24
3800 SELVITZ RD, FORT PIERCE, FLORIDA
 APPROVED JURISDICTIONAL DETERMINATION REQUEST
FEMA FLOOD MAP

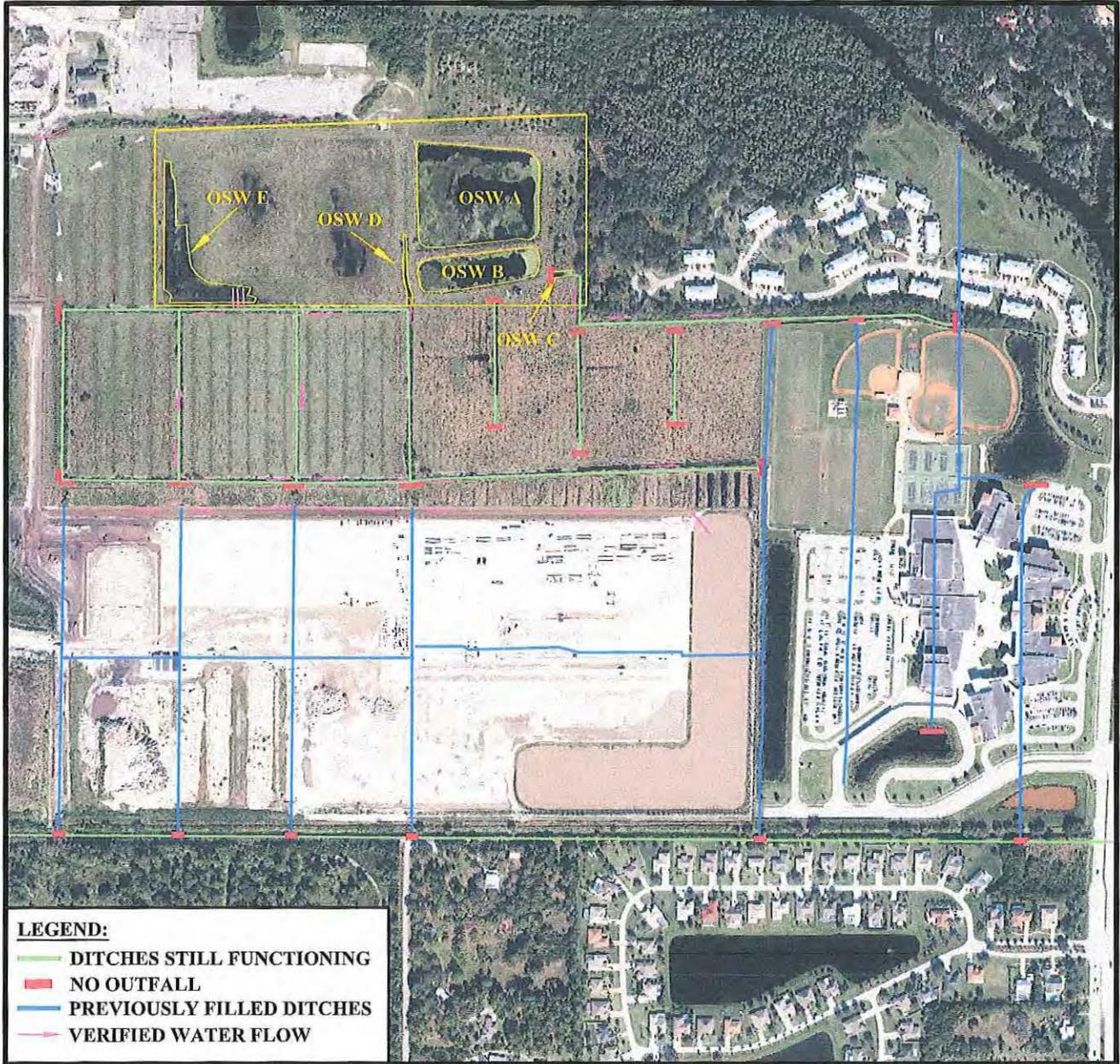
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 Hobe Sound, FL. 33455
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NOT A SURVEY



SCALE: 1" = 600'



SOURCE: 2018 FDOT AERIAL PHOTOGRAPH

PARCEL ID # 2432-122-0001-000-5

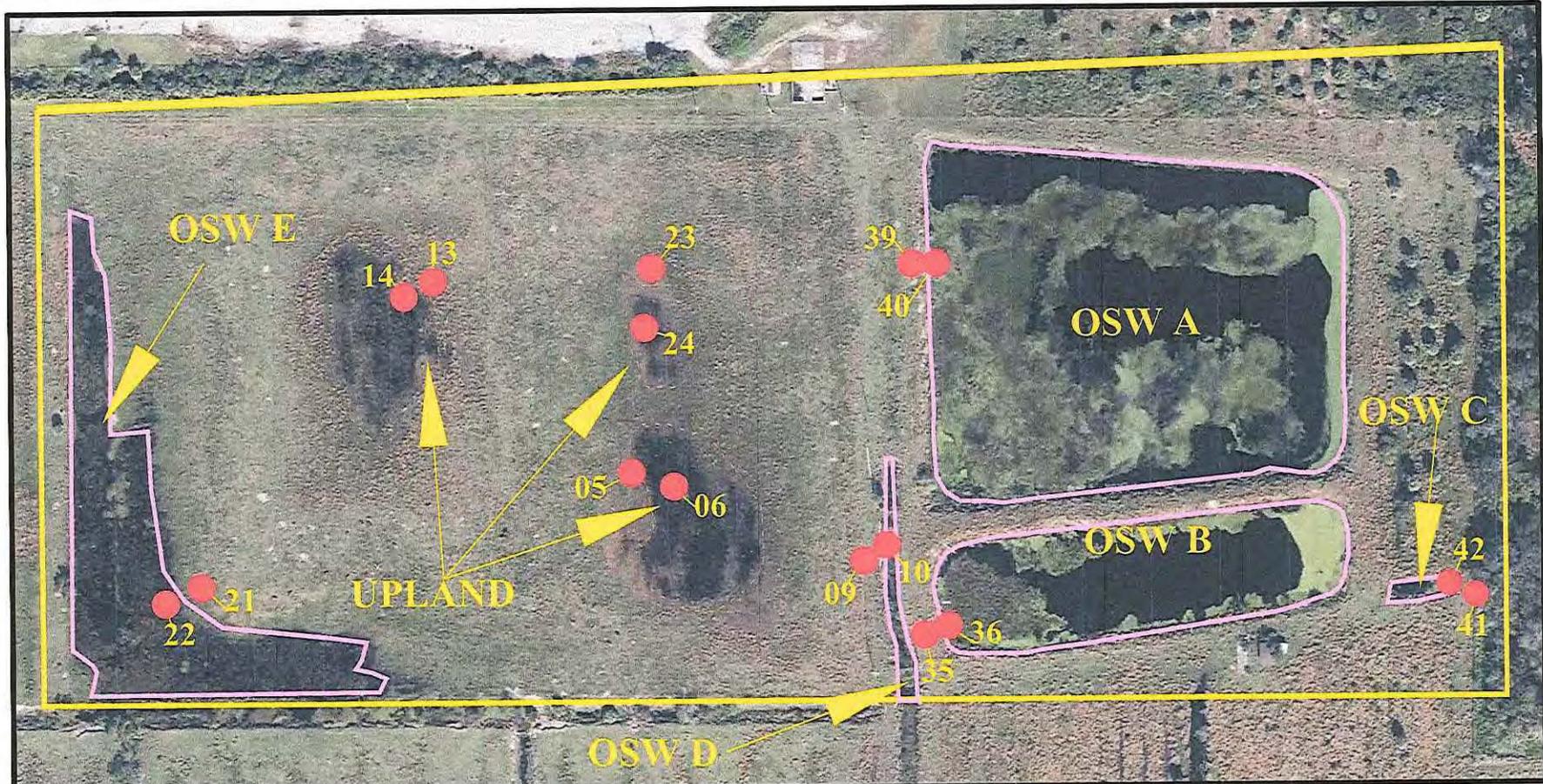
ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.:	DRAWING NAME:	DATE:	APPENDIX A
	32	35S	40E	19 - 007.11	11 - DITCHES.DWG	14 MAY 2019	FIGURE: 11 OF 14

LATITUDE: 27°23'45.883"	LONGITUDE: -80°21'30.623"	DESIGNED BY: RLW	DRAWN BY: MEB	CHECKED BY: RLW
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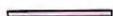
BHT 24
3800 SELVITZ RD, FORT PIERCE, FLORIDA
 APPROVED JURISDICTIONAL DETERMINATION REQUEST
 ON-SITE AND OFF-SITE DITCH FLOW

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LEGEND:

-  PROPERTY LINE
-  OSW BOUNDARY
-  UPLAND LOCATION
-  SOIL PLUG ID AND LOCATION



NORTH



SCALE: 1" = 180'

SOURCE: 2018 FDOT AERIAL

PARCEL ID # 2432-122-0001-000-5

LATITUDE: 27°23'52.297"	LONGITUDE: -80°21'40.142"	DESIGNED BY: RLW	DRAWN BY: BAR			CHECKED BY: FRP
BHT 24 3800 SELVITZ RD, FORT PIERCE, FLORIDA APPROVED JURISDICTIONAL DETERMINATION REQUEST WETLAND, OSW, AND SOIL PLUG LOCATIONS		ST. LUCIE COUNTY FLORIDA		SEC.	TWP.	R.
				32	35S	40E
DRAWING NAME: PLUG LOC.DWG		DATE: 14 MAY 2019		HSE JOB NO.: 19-007.11		
				FIGURE: 13 OF 14		

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9512 SE Duncan Street
Hobe Sound, FL 33455
(772)545-3676, E-mail: bobhsenv@gmail.com

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: BHT of Florida 4008 LLC City/County: St. Lucie Sampling Date: 04/04/2019
 Applicant/Owner: Ram Adar State: FL Sampling Point: P05
 Investigator(s): A. Eiseman, M. Brown Section, Township, Range: 32, 35S, 40E
 Landform (hillside, terrace, etc.): flatwoods Local relief (concave, convex, none): smooth/concave Slope (%): 0-2
 Subregion (LRR or MLRA): LRR U Lat: 27° 23' 42.2" Long: -80° 21' 33.5" Datum: NAD83
 Soil Map Unit Name: 2 - Ankona and Farnton sands NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
___ Surface Water (A1) ___ Aquatic Fauna (B13) ___ High Water Table (A2) ___ Marl Deposits (B15) (LRR U) ___ Saturation (A3) ___ Hydrogen Sulfide Odor (C1) ___ Water Marks (B1) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Sediment Deposits (B2) ___ Presence of Reduced Iron (C4) ___ Drift Deposits (B3) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Algal Mat or Crust (B4) ___ Thin Muck Surface (C7) ___ Iron Deposits (B5) ___ Other (Explain in Remarks) ___ Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9)	___ 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 <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
--	--

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: P05

Tree Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ =Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Sapling Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ =Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Shrub Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Spermacoce verticillata</u>	<u>60</u>	<u>Yes</u>	<u>UPL</u>
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ =Total Cover			
50% of total cover: <u>30</u> 20% of total cover: <u>12</u>			

Herb Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Cynodon dactylon</u>	<u>5</u>	<u>No</u>	<u>FACU</u>
2. <u>Paspalum notatum</u>	<u>25</u>	<u>Yes</u>	<u>FACU</u>
3. <u>Spermacoce verticillata</u>	<u>40</u>	<u>Yes</u>	<u>UPL</u>
4. <u>Eupatorium capillifolium</u>	<u>15</u>	<u>No</u>	<u>FACU</u>
5. <u>Panicum repens</u>	<u>5</u>	<u>No</u>	<u>FACW</u>
6. <u>Indigofera hirsuta</u>	<u>5</u>	<u>No</u>	<u>UPL</u>
7. <u>Urena lobata</u>	<u>5</u>	<u>No</u>	<u>FAC</u>
8. _____			
9. _____			
10. _____			
11. _____			
_____ =Total Cover			
50% of total cover: <u>50</u> 20% of total cover: <u>20</u>			

Woody Vine Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
_____ =Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>5</u>	x 2 = <u>10</u>
FAC species <u>5</u>	x 3 = <u>15</u>
FACU species <u>45</u>	x 4 = <u>180</u>
UPL species <u>105</u>	x 5 = <u>525</u>
Column Totals: <u>160</u> (A)	<u>730</u> (B)
Prevalence Index = B/A = <u>4.56</u>	

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody Vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (If observed, list morphological adaptations below.)

SOIL

Sampling Point: P05

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3.5	10YR 6/1	80	10YR 4/2	20	MS	M	Sandy	
3.5-8	10YR 4/1	95	10YR 5/4	5	MS	M	Sandy	FILL
8-11	10YR 4/2	100					Sandy	FILL
11-13	10YR 5/1	100					Sandy	FILL

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- 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)
- Barrier Islands 1 cm Muck (S12) (MLRA 153B, 153D)
- 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, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Floodplain Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Coast Prairie Redox (A16) (outside MLRA 150A)
- Reduced Vertic (F18) (outside MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (LRR P, T)
- Anomalous Bright Floodplain Soils (F20) (MLRA 153B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Barrier Islands Low Chroma Matrix (TS7) (MLRA 153B, 153D)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Root/Rock refusal
 Depth (inches):

Hydric Soil Present? Yes No X

Remarks:

This data form is revised from Atlantic and Gulf Coastal Plain Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: BHT of Florida 4008 LLC City/County: St. Lucie Sampling Date: 04/04/2019
 Applicant/Owner: Ram Adar State: FL Sampling Point: P06
 Investigator(s): A. Eiseman, M. Brown Section, Township, Range: 32, 35S, 40E
 Landform (hillside, terrace, etc.): flatwoods Local relief (concave, convex, none): smooth/concave Slope (%): 0-2
 Subregion (LRR or MLRA): LRR U Lat: 27° 23' 42.0" Long: -80° 21' 33.0" Datum: NAD83
 Soil Map Unit Name: 2 - Ankona and Farmton sands NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: Dug down past 24"; no saturation, nor any indicators of periodic hydrologic activity, aside from past aerial images and the presence of hydrophytic vegetation.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T,U)

Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: P06

Tree Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
=Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Sapling Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
=Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Shrub Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
=Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Herb Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Panicum repens</u>	<u>70</u>	<u>Yes</u>	<u>FACW</u>
2. <u>Commelina caroliniana</u>	<u>30</u>	<u>No</u>	<u>FAC</u>
3. <u>Spermacoce verticillata</u>	<u>20</u>	<u>No</u>	<u>UPL</u>
4. <u>Phyla nodiflora</u>	<u>5</u>	<u>No</u>	<u>FAC</u>
5. <u>Persicaria lapathifolia</u>	<u>60</u>	<u>Yes</u>	<u>FACW</u>
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
185 =Total Cover			
50% of total cover: <u>93</u> 20% of total cover: <u>37</u>			

Woody Vine Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
=Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>130</u>	x 2 = <u>260</u>
FAC species <u>35</u>	x 3 = <u>105</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>20</u>	x 5 = <u>100</u>
Column Totals: <u>185</u> (A)	<u>465</u> (B)
Prevalence Index = B/A = <u>2.51</u>	

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody Vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: (If observed, list morphological adaptations below.)

SOIL

Sampling Point: P06

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7.5	10YR 5/1	90	10YR 5/2	10	MS	M	Sandy	FILL
7.5-10.5	10YR 4/1	75	10YR 5/2	25	MS	M	Sandy	FILL
10.5-14.5	10YR 6/1	85	10YR 3/2	15	MS	M	Sandy	FILL

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|---|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) |
| <input type="checkbox"/> Black Histic (A3) | (MLRA 153B, 153D) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | (outside MLRA 150A) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | <input type="checkbox"/> Depleted Matrix (F3) | (outside MLRA 150A, 150B) |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Redox Depressions (F8) | (MLRA 153B) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Marl (F10) (LRR U) | <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | <input type="checkbox"/> Very Shallow Dark Surface (F22) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | (MLRA 153B, 153D) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U) | (MLRA 149A, 153C, 153D) | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Loose sand
 Depth (inches): 14.5

Hydric Soil Present? Yes No

Remarks:

This data form is revised from Atlantic and Gulf Coastal Plain Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: BHT of Florida 4008 LLC City/County: St. Lucie Sampling Date: 04/04/2019
 Applicant/Owner: Ram Adar State: FL Sampling Point: P09
 Investigator(s): A. Eiseman, M. Brown Section, Township, Range: 32, 35S, 40E
 Landform (hillside, terrace, etc.): flatwoods Local relief (concave, convex, none): smooth/convex Slope (%): 0-2
 Subregion (LRR or MLRA): LRR U Lat: 27° 23' 41.2" Long: -80° 21' 30.6" Datum: NAD83
 Soil Map Unit Name: 43 - Susanna and Wauchula sands NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T,U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (Includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: P09

Tree Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
=Total Cover			
50% of total cover: _____		20% of total cover: _____	

Sapling Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
=Total Cover			
50% of total cover: _____		20% of total cover: _____	

Shrub Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
=Total Cover			
50% of total cover: _____		20% of total cover: _____	

Herb Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Sporobolus jacquemontii</u>	<u>50</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Spermacoce verticillata</u>	<u>15</u>	<u>Yes</u>	<u>UPL</u>
3. <u>Sida ulmifolia</u>	<u>10</u>	<u>No</u>	<u>UPL</u>
4. <u>Urena lobata</u>	<u>5</u>	<u>No</u>	<u>FAC</u>
5. <u>Indigofera hirsuta</u>	<u>10</u>	<u>No</u>	<u>UPL</u>
6. <u>Eupatorium capillifolium</u>	<u>5</u>	<u>No</u>	<u>FACU</u>
7. <u>Mimosa quadrivalvis</u>	<u>5</u>	<u>No</u>	<u>UPL</u>
8. _____			
9. _____			
10. _____			
11. _____			
100 =Total Cover			
50% of total cover: <u>50</u>		20% of total cover: <u>20</u>	

Woody Vine Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
=Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>5</u>	x 3 = <u>15</u>
FACU species <u>55</u>	x 4 = <u>220</u>
UPL species <u>40</u>	x 5 = <u>200</u>
Column Totals: <u>100</u> (A)	<u>435</u> (B)
Prevalence Index = B/A = <u>4.35</u>	

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody Vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (If observed, list morphological adaptations below.)

SOIL

Sampling Point: P09

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 5/1	100					Sandy	
4-10	10YR 3/1	90	10YR 5/3	5			Sandy	FILL
			10YR 2/1	5	MS	M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- 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)
- Barrier Islands 1 cm Muck (S12) (MLRA 153B, 153D)
- 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, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Floodplain Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Coast Prairie Redox (A16) (outside MLRA 150A)
- Reduced Vertic (F18) (outside MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (LRR P, T)
- Anomalous Bright Floodplain Soils (F20) (MLRA 153B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Barrier Islands Low Chroma Matrix (TS7) (MLRA 153B, 153D)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Root refusal
 Depth (inches): 10

Hydric Soil Present? Yes No

Remarks:

This data form is revised from Atlantic and Gulf Coastal Plain Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: BHT of Florida 4008 LLC City/County: St. Lucie Sampling Date: 04/04/2019
 Applicant/Owner: Ram Adar State: FL Sampling Point: P10
 Investigator(s): A. Eiseman, M. Brown Section, Township, Range: 32, 35S, 40E
 Landform (hillside, terrace, etc.): flatwoods Local relief (concave, convex, none): smooth/convex Slope (%): 0-2
 Subregion (LRR or MLRA): LRR U Lat: 27° 23' 41.3" Long: -80° 21' 30.3" Datum: NAD83
 Soil Map Unit Name: 43 - Susanna and Wauchula sands NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: Taken within OSW	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T,U)

Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>10</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>4</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: P10

Tree Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
=Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Sapling Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
=Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Shrub Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Ludwigia peruviana</u>	<u>20</u>	<u>Yes</u>	<u>OBL</u>
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
=Total Cover			
50% of total cover: <u>10</u> 20% of total cover: <u>4</u>			

Herb Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Typha latifolia</u>	<u>50</u>	<u>Yes</u>	<u>OBL</u>
2. <u>Urena lobata</u>	<u>5</u>	<u>No</u>	<u>FAC</u>
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
=Total Cover			
50% of total cover: <u>28</u> 20% of total cover: <u>11</u>			

Woody Vine Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
=Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>70</u>	x 1 = <u>70</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>5</u>	x 3 = <u>15</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>75</u> (A)	<u>85</u> (B)
Prevalence Index = B/A = <u>1.13</u>	

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody Vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (If observed, list morphological adaptations below.)

SOIL

Sampling Point: P10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 2/1	100					Muck	
3-6	10YR 6/1	90	10YR 2/1	10	C	M	Sandy	
6-11	10YR 5/1	80	10YR 2/1	10	MS	M	Sandy	
			10YR 6/1	10	D	M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils³:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Barrier Islands 1 cm Muck (S12)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)	
<input type="checkbox"/> Black Histic (A3)	(MLRA 153B, 153D)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	(outside MLRA 150A)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Reduced Vertic (F18)	
<input checked="" type="checkbox"/> Organic Bodies (A6) (LRR, P, T, U)	<input type="checkbox"/> Depleted Matrix (F3)	(outside MLRA 150A, 150B)	
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T)	
<input checked="" type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)	
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Redox Depressions (F8)	(MLRA 153B)	
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Marl (F10) (LRR U)	<input type="checkbox"/> Red Parent Material (F21)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	<input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	(MLRA 153B, 153D)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)		
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)		
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)		
<input type="checkbox"/> Polyvalue Below Surface (S8)	(MLRA 149A, 153C, 153D)		
(LRR S, T, U)			

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Type: <u>Water table</u>	
Depth (inches): <u>11</u>	

Remarks:
 This data form is revised from Atlantic and Gulf Coastal Plain Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: BHT of Florida 4008 LLC City/County: St. Lucie Sampling Date: 04/04/2019
 Applicant/Owner: Ram Adar State: FL Sampling Point: P13
 Investigator(s): A. Eiseman, M. Brown Section, Township, Range: 32, 35S, 40E
 Landform (hillside, terrace, etc.): flatwoods Local relief (concave, convex, none): smooth/concave Slope (%): 0-2
 Subregion (LRR or MLRA): LRR U Lat: 27° 23' 44.3" Long: -80° 21' 35.9" Datum: NAD83
 Soil Map Unit Name: 2 - Ankona and Farmton sands NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T,U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: P13

Tree Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ =Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Sapling Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ =Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Shrub Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ =Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Herb Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Sporobolus jacquemontii</u>	<u>100</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Urena lobata</u>	<u>5</u>	<u>No</u>	<u>FAC</u>
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
_____ =Total Cover			
50% of total cover: <u>53</u> 20% of total cover: <u>21</u>			

Woody Vine Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
_____ =Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>5</u>	x 3 = <u>15</u>
FACU species <u>100</u>	x 4 = <u>400</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>105</u> (A)	<u>415</u> (B)
Prevalence Index = B/A = <u>3.95</u>	

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
- Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

- Definitions of Five Vegetation Strata:**
- Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
- Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
- Shrub** - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
- Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
- Woody Vine** – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (If observed, list morphological adaptations below.)

SOIL

Sampling Point: P13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 5/1	100					Sandy	
3-7	10YR 5/2	70	10YR 5/1	20	MS	M	Sandy	FILL
			10YR 6/3	10	MS	M		
7-9.5	10YR 3/2	90	10YR 6/3	5	MS	M	Sandy	FILL
			10YR 6/1	5	MS	M		
9.5-12	10YR 6/1	80	10YR 8/1	10	MS	M	Sandy	FILL
			10YR 5/2	10	MS	M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- 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)
- Barrier Islands 1 cm Muck (S12) (MLRA 153B, 153D)
- 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, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Floodplain Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Coast Prairie Redox (A16) (outside MLRA 150A)
- Reduced Vertic (F18) (outside MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (LRR P, T)
- Anomalous Bright Floodplain Soils (F20) (MLRA 153B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Barrier Islands Low Chroma Matrix (TS7) (MLRA 153B, 153D)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Rock refusal
 Depth (inches): 12

Hydric Soil Present? Yes No

Remarks:

This data form is revised from Atlantic and Gulf Coastal Plain Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: BHT of Florida 4008 LLC City/County: St. Lucie Sampling Date: 04/04/2019
 Applicant/Owner: Ram Adar State: FL Sampling Point: P14
 Investigator(s): A. Eiseman, M. Brown Section, Township, Range: 32, 35S, 40E
 Landform (hillside, terrace, etc.): flatwoods Local relief (concave, convex, none): smooth/concave Slope (%): 0-2
 Subregion (LRR or MLRA): LRR U Lat: 27° 23' 44.098" Long: -80° 21' 36.288" Datum: NAD83
 Soil Map Unit Name: 2- ANKONA AND FARMTON SANDS NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T,U)
Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: P14

Tree Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
=Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Sapling Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
=Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Shrub Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
=Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Herb Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Commelina diffusa</u>	<u>40</u>	<u>Yes</u>	<u>FACW</u>
2. <u>Persicaria lapathifolia</u>	<u>40</u>	<u>Yes</u>	<u>FACW</u>
3. <u>Panicum repens</u>	<u>15</u>	<u>No</u>	<u>FACW</u>
4. <u>Sagittaria latifolia</u>	<u>5</u>	<u>No</u>	<u>OBL</u>
5. <u>Ludwigia octovalvis</u>	<u>5</u>	<u>No</u>	<u>OBL</u>
6. <u>Ludwigia peruviana</u>	<u>5</u>	<u>No</u>	<u>OBL</u>
7. <u>Solanum bahamense</u>	<u>5</u>	<u>No</u>	<u>FAC</u>
8. _____			
9. _____			
10. _____			
11. _____			
=Total Cover			
50% of total cover: <u>58</u> 20% of total cover: <u>23</u>			

Woody Vine Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
=Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>15</u>	x 1 = <u>15</u>
FACW species <u>95</u>	x 2 = <u>190</u>
FAC species <u>5</u>	x 3 = <u>15</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>115</u> (A)	<u>220</u> (B)
Prevalence Index = B/A = <u>1.91</u>	

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 X 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody Vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (If observed, list morphological adaptations below.)

SOIL

Sampling Point: P14

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 5/1	100					Sandy	FILL
3-8.5	10YR 5/2	97	10YR 6/4	3			Sandy	FILL
8.5-12.5	10YR 6/1	100					Sandy	FILL

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U)
- Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12)
- Black Histic (A3) **(MLRA 153B, 153D)**
- Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O)
- Stratified Layers (A5) Loamy Gleyed Matrix (F2)
- Organic Bodies (A6) (LRR P, T, U) Depleted Matrix (F3)
- 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6)
- Muck Presence (A8) (LRR U) Depleted Dark Surface (F7)
- 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8)
- Depleted Below Dark Surface (A11) Marl (F10) (LRR U)
- Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151)
- Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T)
- Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U)
- Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151)
- Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B)
- Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A)
- Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20)
- Polyvalue Below Surface (S8) **(MLRA 149A, 153C, 153D)**
- (LRR S, T, U)**

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Coast Prairie Redox (A16)
- (outside MLRA 150A)**
- Reduced Vertic (F18)
- (outside MLRA 150A, 150B)**
- Piedmont Floodplain Soils (F19) (LRR P, T)
- Anomalous Bright Floodplain Soils (F20)
- (MLRA 153B)**
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Barrier Islands Low Chroma Matrix (TS7)
- (MLRA 153B, 153D)**
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Loose sand

Depth (inches): 12.5

Hydric Soil Present? Yes No

Remarks:

This data form is revised from Atlantic and Gulf Coastal Plain Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: BHT of Florida 4008 LLC City/County: St. Lucie Sampling Date: 04/04/2019
 Applicant/Owner: Ram Adar State: FL Sampling Point: P21
 Investigator(s): A. Eiseman, M. Brown Section, Township, Range: 32, 35S, 40E
 Landform (hillside, terrace, etc.): flatwoods Local relief (concave, convex, none): smooth/concave Slope (%): 0-2
 Subregion (LRR or MLRA): LRR U Lat: 27° 23' 40.8" Long: -80° 21' 38.8" Datum: NAD83
 Soil Map Unit Name: 2 - Ankona and Farmton sands NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present?	Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present?	Yes <u> </u> No <u>X</u>	
Remarks:		

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T,U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: P21

Tree Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ =Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Sapling Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Quercus virginiana</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ =Total Cover			
50% of total cover: <u>3</u> 20% of total cover: <u>1</u>			

Shrub Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ =Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Herb Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Sida ulmifolia</u>	<u>55</u>	<u>Yes</u>	<u>UPL</u>
2. <u>Spermacoce verticillata</u>	<u>30</u>	<u>Yes</u>	<u>UPL</u>
3. <u>Eupatorium capillifolium</u>	<u>10</u>	<u>No</u>	<u>FACU</u>
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
_____ =Total Cover			
50% of total cover: <u>48</u> 20% of total cover: <u>19</u>			

Woody Vine Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
_____ =Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>15</u>	x 4 = <u>60</u>
UPL species <u>85</u>	x 5 = <u>425</u>
Column Totals: <u>100</u> (A)	<u>485</u> (B)
Prevalence Index = B/A = <u>4.85</u>	

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
- Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody Vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (If observed, list morphological adaptations below.)

SOIL

Sampling Point: P21

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 6/1	100					Sandy	FILL
2-5.5	10YR 4/2	95	10YR 6/3	3	MS	M	Sandy	FILL
			10YR 3/2	2	MS	M		
5.5-8	10YR 4/1	60	10YR 3/2	20				FILL
			10YR 7/3	10				
			10YR 4/2	10				

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) |
| <input type="checkbox"/> Black Histic (A3) | (MLRA 153B, 153D) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Organic Bodies (A6) (LRR, P, T, U) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Marl (F10) (LRR U) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | (MLRA 149A, 153C, 153D) |
| (LRR S, T, U) | |

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Coast Prairie Redox (A16)
- (outside MLRA 150A)**
- Reduced Vertic (F18)
- (outside MLRA 150A, 150B)**
- Piedmont Floodplain Soils (F19) (LRR P, T)
- Anomalous Bright Floodplain Soils (F20)
- (MLRA 153B)**
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Barrier Islands Low Chroma Matrix (TS7)
- (MLRA 153B, 153D)**
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: LOOSE SAND
 Depth (inches): 11.5

Hydric Soil Present? Yes No

Remarks:
 SOIL DATA CONTINUED ON NEXT PAGE (1 OF 2)

SOIL

Sampling Point: P21

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
8-11.5	10YR 4/1	60	10YR 5/1	40	MS	M	Sandy	FILL
			10YR 6/3	7	MS	M		
			10YR 3/2	3	MS	M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- 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)
- Barrier Islands 1 cm Muck (S12) (MLRA 153B, 153D)
- 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, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Floodplain Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Coast Prairie Redox (A16) (outside MLRA 150A)
- Reduced Vertic (F18) (outside MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (LRR P, T)
- Anomalous Bright Floodplain Soils (F20) (MLRA 153B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Barrier Islands Low Chroma Matrix (TS7) (MLRA 153B, 153D)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: LOOSE SAND
 Depth (inches): 11.5

Hydric Soil Present? Yes No

Remarks:
 SOIL DATA CONTINUED FROM PREVIOUS PAGE (2 OF 2)

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: BHT of Florida 4008 LLC City/County: St. Lucie Sampling Date: 04/04/2019
 Applicant/Owner: Ram Adar State: FL Sampling Point: P22
 Investigator(s): A. Eiseman, M. Brown Section, Township, Range: 32, 35S, 40E
 Landform (hillside, terrace, etc.): flatwoods Local relief (concave, convex, none): smooth/concave Slope (%): 0-2
 Subregion (LRR or MLRA): LRR U Lat: 27° 23' 42.586" Long: -80° 21' 39.661" Datum: NAD83
 Soil Map Unit Name: 2- ANKONA AND FARMTON SANDS NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: Taken within OSW	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Aquatic Fauna (B13) ___ High Water Table (A2) ___ Marl Deposits (B15) (LRR U) <u>x</u> Saturation (A3) ___ Hydrogen Sulfide Odor (C1) <u>x</u> Water Marks (B1) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Sediment Deposits (B2) ___ Presence of Reduced Iron (C4) ___ Drift Deposits (B3) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Algal Mat or Crust (B4) ___ Thin Muck Surface (C7) ___ Iron Deposits (B5) ___ Other (Explain in Remarks) ___ Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> ___ 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) <u>X</u> FAC-Neutral Test (D5) ___ Sphagnum Moss (D8) (LRR T,U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>18.5</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: P22

Tree Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ =Total Cover			
50% of total cover: _____		20% of total cover: _____	

Sapling Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ =Total Cover			
50% of total cover: _____		20% of total cover: _____	

Shrub Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Ludwigia peruviana</u>	<u>60</u>	<u>Yes</u>	<u>OBL</u>
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ =Total Cover			
50% of total cover: <u>30</u>		20% of total cover: <u>12</u>	

Herb Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Urochloa mutica</u>	<u>60</u>	<u>Yes</u>	<u>FACW</u>
2. <u>Persicaria lapathifolia</u>	<u>35</u>	<u>Yes</u>	<u>FACW</u>
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
_____ =Total Cover			
50% of total cover: <u>48</u>		20% of total cover: <u>19</u>	

Woody Vine Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
_____ =Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>60</u>	x 1 = <u>60</u>
FACW species <u>95</u>	x 2 = <u>190</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>155</u> (A)	<u>250</u> (B)
Prevalence Index = B/A = <u>1.61</u>	

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody Vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (If observed, list morphological adaptations below.)

SOIL

Sampling Point: P22

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 3/1	100					Muck	
3-7.5	10YR 3/2	95	10YR 5/2	5	D	M	Sandy	
7.5-9.5	10YR 3/2	70	10YR 3/3	30			Muck	
9.5-13	10YR 6/1	60	10YR 6/4	35			Loamy/Clayey	
			10YR 5/6	5				

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) |
| <input type="checkbox"/> Black Histic (A3) | (MLRA 153B, 153D) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) |
| <input checked="" type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input checked="" type="checkbox"/> Muck Presence (A8) (LRR U) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Marl (F10) (LRR U) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | (MLRA 149A, 153C, 153D) |
| (LRR S, T, U) | |

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Coast Prairie Redox (A16)
- (outside MLRA 150A)**
- Reduced Vertic (F18)
- (outside MLRA 150A, 150B)**
- Piedmont Floodplain Soils (F19) (LRR P, T)
- Anomalous Bright Floodplain Soils (F20)
- (MLRA 153B)**
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Barrier Islands Low Chroma Matrix (TS7)
- (MLRA 153B, 153D)**
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Water table
 Depth (inches): 13

Hydric Soil Present? Yes No

Remarks:

This data form is revised from Atlantic and Gulf Coastal Plain Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: P23

Tree Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
=Total Cover			
50% of total cover: _____		20% of total cover: _____	

Sapling Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
=Total Cover			
50% of total cover: _____		20% of total cover: _____	

Shrub Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
=Total Cover			
50% of total cover: _____		20% of total cover: _____	

Herb Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Spermacoce verticillata</u>	<u>55</u>	<u>Yes</u>	<u>UPL</u>
2. <u>Sporobolus jacquemontii</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>
3. <u>Eupatorium capillifolium</u>	<u>10</u>	<u>No</u>	<u>FACU</u>
4. <u>Ambrosia artemisiifolia</u>	<u>5</u>	<u>No</u>	<u>FACU</u>
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
100 =Total Cover			
50% of total cover: <u>50</u>		20% of total cover: <u>20</u>	

Woody Vine Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
=Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u> 0 </u>	x 1 = <u> 0 </u>
FACW species <u> 0 </u>	x 2 = <u> 0 </u>
FAC species <u> 0 </u>	x 3 = <u> 0 </u>
FACU species <u> 45 </u>	x 4 = <u> 180 </u>
UPL species <u> 55 </u>	x 5 = <u> 275 </u>
Column Totals: <u> 100 </u> (A)	<u> 455 </u> (B)
Prevalence Index = B/A = <u> 4.55 </u>	

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody Vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (If observed, list morphological adaptations below.)

SOIL

Sampling Point: P23

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 6/1	100					Sandy	FILL
3-5.5	10YR 4/1	98	10YR 5/4	2	MS	M	Sandy	FILL
5.5-6.5	10YR 5/2	100					Sandy	FILL
6.5-10.5	10YR 4/2	95	10YR 3/2	5	MS	M	Sandy	FILL

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) |
| <input type="checkbox"/> Black Histic (A3) | (MLRA 153B, 153D) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | (outside MLRA 150A) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | <input type="checkbox"/> Depleted Matrix (F3) | (outside MLRA 150A, 150B) |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Redox Depressions (F8) | (MLRA 153B) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Marl (F10) (LRR U) | <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | <input type="checkbox"/> Very Shallow Dark Surface (F22) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | (MLRA 153B, 153D) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | (MLRA 149A, 153C, 153D) | |
| (LRR S, T, U) | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: LOOSE SAND
 Depth (inches): 10.5

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: BHT of Florida 4008 LLC City/County: St. Lucie Sampling Date: 04/04/2019
 Applicant/Owner: Ram Adar State: FL Sampling Point: P24
 Investigator(s): A. Eiseman, M. Brown Section, Township, Range: 32, 35S, 40E
 Landform (hillside, terrace, etc.): flatwoods Local relief (concave, convex, none): smooth/concave Slope (%): 0-2
 Subregion (LRR or MLRA): LRR U Lat: 27° 23' 43.728" Long: -80° 21' 33.318" Datum: NAD83
 Soil Map Unit Name: 2- ANKONA AND FARMTON SANDS NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T,U)
--	--

Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: P24

Tree Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ =Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ =Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ =Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Bacopa repens</u>	<u>5</u>	<u>No</u>	<u>FACW</u>
2. <u>Persicaria lapathifolia</u>	<u>5</u>	<u>No</u>	<u>FACW</u>
3. <u>Ludwigia octovalvis</u>	<u>10</u>	<u>Yes</u>	<u>OBL</u>
4. <u>Ludwigia peruviana</u>	<u>10</u>	<u>Yes</u>	<u>OBL</u>
5. <u>Limnodium spongia</u>	<u>5</u>	<u>No</u>	<u>OBL</u>
6. <u>Commelina diffusa</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>
7. <u>Paspalum notatum</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>
8. <u>Sporobolus jaquemontii</u>	<u>10</u>	<u>Yes</u>	<u>UPL</u>
9. <u>Panicum repens</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>
10. _____			
11. _____			
_____ =Total Cover			
50% of total cover: _____		20% of total cover: _____	
50% of total cover: <u>45</u>		20% of total cover: <u>18</u>	
Woody Vine Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
_____ =Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>25</u>	x 1 = <u>25</u>
FACW species <u>40</u>	x 2 = <u>80</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>15</u>	x 4 = <u>60</u>
UPL species <u>10</u>	x 5 = <u>50</u>
Column Totals: <u>90</u> (A)	<u>215</u> (B)
Prevalence Index = B/A = <u>2.39</u>	

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody Vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: (If observed, list morphological adaptations below.)

SOIL

Sampling Point: P24

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 5/1	100					Sandy	Fill
4-9.5	10YR 4/1	90	10YR 5/2	10			Sandy	
9.5-13.5	10YR 3/2	60	10YR 5/3	40			Sandy	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) |
| <input type="checkbox"/> Black Histic (A3) | (MLRA 153B, 153D) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | (outside MLRA 150A) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | <input type="checkbox"/> Depleted Matrix (F3) | (outside MLRA 150A, 150B) |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Redox Depressions (F8) | (MLRA 153B) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Marl (F10) (LRR U) | <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | <input type="checkbox"/> Very Shallow Dark Surface (F22) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | (MLRA 153B, 153D) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | (MLRA 149A, 153C, 153D) | |
| (LRR S, T, U) | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Loose sand
 Depth (inches): 13.5

Hydric Soil Present? Yes No

Remarks:

This data form is revised from Atlantic and Gulf Coastal Plain Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: BHT of Florida 4008 LLC City/County: St. Lucie Sampling Date: 04/04/2019
 Applicant/Owner: Ram Adar State: FL Sampling Point: P35
 Investigator(s): A. Eiseaman, M. Brown Section, Township, Range: 32, 35S, 40E
 Landform (hillside, terrace, etc.): flatwoods Local relief (concave, convex, none): smooth/concave Slope (%): 0-2
 Subregion (LRR or MLRA): LRR U Lat: 27° 23' 40.3" Long: -80° 21' 29.9" Datum: NAD83
 Soil Map Unit Name: 43-SUSANNA AND WAUCHULA SANDS NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required: check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T,U)

Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: P35

Tree Stratum (Plot size: <u> 20' X 20' </u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u> N/A </u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ =Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Sapling Stratum (Plot size: <u> 20' X 20' </u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u> N/A </u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ =Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Shrub Stratum (Plot size: <u> 20' X 20' </u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ =Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Herb Stratum (Plot size: <u> 20' X 20' </u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u> Sporobolus jacquemontii </u>	<u> 60 </u>	<u> Yes </u>	<u> FACU </u>
2. <u> PASPALUM NOTATUM </u>	<u> 20 </u>	<u> Yes </u>	<u> FACU </u>
3. <u> Indigofera hirsuta </u>	<u> 5 </u>	<u> No </u>	<u> UPL </u>
4. <u> SPERMACOCE VERTICILLATA </u>	<u> 5 </u>	<u> No </u>	<u> UPL </u>
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
_____ =Total Cover			
50% of total cover: <u> 45 </u> 20% of total cover: <u> 18 </u>			

Woody Vine Stratum (Plot size: <u> 20' X 20' </u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u> N/A </u>			
2. _____			
3. _____			
4. _____			
5. _____			
_____ =Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u> 0 </u>	x 1 = <u> 0 </u>
FACW species <u> 0 </u>	x 2 = <u> 0 </u>
FAC species <u> 0 </u>	x 3 = <u> 0 </u>
FACU species <u> 80 </u>	x 4 = <u> 320 </u>
UPL species <u> 10 </u>	x 5 = <u> 50 </u>
Column Totals: <u> 90 </u> (A)	<u> 370 </u> (B)
Prevalence Index = B/A = <u> 4.11 </u>	

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody Vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present?

Yes No X

Remarks: (If observed, list morphological adaptations below.)

SOIL

Sampling Point: P35

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 5/1	100					Sandy	FILL
4-11	10YR 3/1	90	10YR 2/2	5			Sandy	FILL
			10YR 5/3	5				

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U)
- Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12)
- Black Histic (A3) (MLRA 153B, 153D)
- Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O)
- Stratified Layers (A5) Loamy Gleyed Matrix (F2)
- Organic Bodies (A6) (LRR, P, T, U) Depleted Matrix (F3)
- 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6)
- Muck Presence (A8) (LRR U) Depleted Dark Surface (F7)
- 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8)
- Depleted Below Dark Surface (A11) Marl (F10) (LRR U)
- Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151)
- Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T)
- Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U)
- Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151)
- Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B)
- Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A)
- Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20)
- Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D)
- (LRR S, T, U)

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Coast Prairie Redox (A16)
- (outside MLRA 150A)
- Reduced Vertic (F18)
- (outside MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (LRR P, T)
- Anomalous Bright Floodplain Soils (F20)
- (MLRA 153B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Barrier Islands Low Chroma Matrix (TS7)
- (MLRA 153B, 153D)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Rock refusal
 Depth (inches): 11

Hydric Soil Present? Yes No

Remarks:

This data form is revised from Atlantic and Gulf Coastal Plain Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: BHT of Florida 4008 LLC City/County: St. Lucie Sampling Date: 04/04/2019
 Applicant/Owner: Ram Adar State: FL Sampling Point: P36
 Investigator(s): A. Eiseman, M. Brown Section, Township, Range: 32, 35S, 40E
 Landform (hillside, terrace, etc.): flatwoods Local relief (concave, convex, none): smooth/concave Slope (%): 0-2
 Subregion (LRR or MLRA): LRR U Lat: 27° 23' 40.4 " Long: -80° 21' 26.9" Datum: NAD83
 Soil Map Unit Name: 43-SUSANNA AND WAUCHULA SANDS NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: Taken within OSW	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Aquatic Fauna (B13) <u>X</u> High Water Table (A2) ___ Marl Deposits (B15) (LRR U) <u>X</u> Saturation (A3) ___ Hydrogen Sulfide Odor (C1) ___ Water Marks (B1) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Sediment Deposits (B2) ___ Presence of Reduced Iron (C4) ___ Drift Deposits (B3) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Algal Mat or Crust (B4) ___ Thin Muck Surface (C7) ___ Iron Deposits (B5) ___ Other (Explain in Remarks) ___ Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> ___ 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) <u>X</u> FAC-Neutral Test (D5) ___ Sphagnum Moss (D8) (LRR T,U)
Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>9</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: _____ _____ _____	
Remarks: _____ _____ _____	

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: P36

Tree Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
=Total Cover			
50% of total cover: _____		20% of total cover: _____	

Sapling Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
=Total Cover			
50% of total cover: _____		20% of total cover: _____	

Shrub Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Ludwigia peruviana</u>	<u>80</u>	<u>Yes</u>	<u>OBL</u>
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
=Total Cover			
50% of total cover: <u>40</u>		20% of total cover: <u>16</u>	

Herb Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Urena lobata</u>	<u>5</u>	<u>No</u>	<u>FAC</u>
2. <u>Cyperus articulatus</u>	<u>30</u>	<u>Yes</u>	<u>OBL</u>
3. <u>Salvinia minima</u>	<u>5</u>	<u>No</u>	<u>OBL</u>
4. <u>Eleocharis equisetoides</u>	<u>30</u>	<u>Yes</u>	<u>OBL</u>
5. <u>Urochloa mutica</u>	<u>5</u>	<u>No</u>	<u>FACW</u>
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
=Total Cover			
50% of total cover: <u>38</u>		20% of total cover: <u>15</u>	

Woody Vine Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
=Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>145</u>	x 1 = <u>145</u>
FACW species <u>5</u>	x 2 = <u>10</u>
FAC species <u>5</u>	x 3 = <u>15</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>155</u> (A)	<u>170</u> (B)
Prevalence Index = B/A = <u>1.10</u>	

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody Vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (If observed, list morphological adaptations below.)

SOIL

Sampling Point: P36

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-1.5	10YR 2/1	100					Muck	
2-5	10YR 3/1	90	10YR 6/2	10			Sandy	
5-8	10YR 5/2	90	10YR 3/2	5			Sandy	
			10YR 4/3	5				
8-10.5	10YR 3/2	100					Sandy	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) |
| <input type="checkbox"/> Black Histic (A3) | (MLRA 153B, 153D) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | (outside MLRA 150A) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Organic Bodies (A6) (LRR, P, T, U) | <input type="checkbox"/> Depleted Matrix (F3) | (outside MLRA 150A, 150B) |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) |
| <input checked="" type="checkbox"/> Muck Presence (A8) (LRR U) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Redox Depressions (F8) | (MLRA 153B) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Marl (F10) (LRR U) | <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | <input type="checkbox"/> Very Shallow Dark Surface (F22) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | (MLRA 153B, 153D) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | (MLRA 149A, 153C, 153D) | |
| (LRR S, T, U) | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Water table
 Depth (inches): 10.5

Hydric Soil Present? Yes X No

Remarks:

This data form is revised from Atlantic and Gulf Coastal Plain Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: BHT of Florida 4008 LLC City/County: St. Lucie Sampling Date: 04/04/2019
 Applicant/Owner: Ram Adar State: FL Sampling Point: P39
 Investigator(s): A. Eiseman, M. Brown Section, Township, Range: 32, 35S, 40E
 Landform (hillside, terrace, etc.): flatwoods Local relief (concave, convex, none): smooth/concave Slope (%): 0-2
 Subregion (LRR or MLRA): LRR U Lat: 27° 23' 44.4" Long: -80° 21' 30.0 Datum: NAD83
 Soil Map Unit Name: 43-SUSANNA AND WAUCHULA SANDS NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T,U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: P39

Tree Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ =Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Sapling Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ =Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Shrub Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ =Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Herb Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Sporobolus jaquemontii</u>	<u>60</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Paspalum notatum</u>	<u>15</u>	<u>No</u>	<u>FACU</u>
3. <u>Indigofera hirsuta</u>	<u>10</u>	<u>No</u>	<u>UPL</u>
4. <u>Spermacoce verticillata</u>	<u>5</u>	<u>No</u>	<u>UPL</u>
5. <u>Eupatorium capillifolium</u>	<u>5</u>	<u>No</u>	<u>FACU</u>
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
_____ =Total Cover			
50% of total cover: <u>48</u> 20% of total cover: <u>19</u>			

Woody Vine Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
_____ =Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>80</u>	x 4 = <u>320</u>
UPL species <u>15</u>	x 5 = <u>75</u>
Column Totals: <u>95</u> (A)	<u>395</u> (B)
Prevalence Index = B/A = <u>4.16</u>	

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody Vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (If observed, list morphological adaptations below.)

SOIL

Sampling Point: P39

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3.5	10YR 5/1	100					Sandy	FILL
3.5-10	10YR 3/2	85	10YR 2/2	5			Sandy	FILL
			10YR 5/3	10				

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) |
| <input type="checkbox"/> Black Histic (A3) | (MLRA 153B, 153D) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | (outside MLRA 150A) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Organic Bodies (A6) (LRR, P, T, U) | <input type="checkbox"/> Depleted Matrix (F3) | (outside MLRA 150A, 150B) |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Redox Depressions (F8) | (MLRA 153B) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Marl (F10) (LRR U) | <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | <input type="checkbox"/> Very Shallow Dark Surface (F22) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | (MLRA 153B, 153D) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | (MLRA 149A, 153C, 153D) | |
| (LRR S, T, U) | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Root refusal
 Depth (inches): 10

Hydric Soil Present? Yes No

Remarks:

This data form is revised from Atlantic and Gulf Coastal Plain Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: BHT of Florida 4008 LLC City/County: St. Lucie Sampling Date: 04/04/2019
 Applicant/Owner: Ram Adar State: FL Sampling Point: P40
 Investigator(s): A. Eiseman, M. Brown Section, Township, Range: 32, 35S, 40E
 Landform (hillside, terrace, etc.): flatwoods Local relief (concave, convex, none): smooth/concave Slope (%): 0-2
 Subregion (LRR or MLRA): LRR U Lat: 27° 23' 44.401" Long: -80° 21' 29.7" Datum: NAD83
 Soil Map Unit Name: 43-SUSANNA AND WAUCHULA SANDS NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: Taken within OSW	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T,U)
Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>12</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>7</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: P40

Tree Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
=Total Cover			
50% of total cover: _____		20% of total cover: _____	

Sapling Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
=Total Cover			
50% of total cover: _____		20% of total cover: _____	

Shrub Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Ludwigia peruviana</u>	<u>30</u>	<u>Yes</u>	<u>OBL</u>
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
30 =Total Cover			
50% of total cover: <u>15</u>		20% of total cover: <u>6</u>	

Herb Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Eleocharis equisetoides</u>	<u>60</u>	<u>Yes</u>	<u>OBL</u>
2. <u>Salvinia minima</u>	<u>10</u>	<u>No</u>	<u>OBL</u>
3. <u>Cyperus articulatus</u>	<u>20</u>	<u>Yes</u>	<u>OBL</u>
4. <u>Urochloa mutica</u>	<u>5</u>	<u>No</u>	<u>FACW</u>
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
95 =Total Cover			
50% of total cover: <u>48</u>		20% of total cover: <u>19</u>	

Woody Vine Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
=Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>120</u>	x 1 = <u>120</u>
FACW species <u>5</u>	x 2 = <u>10</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>125</u> (A)	<u>130</u> (B)
Prevalence Index = B/A = <u>1.04</u>	

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody Vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (If observed, list morphological adaptations below.)

SOIL

Sampling Point: P40

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 2/1	100					Muck	
3-5.5	10YR 5/1	85	10YR 6/1	15	D	M	Sandy	
5.5-8.5	10YR 5/1	95	10YR 2/1	5			Sandy	
8.5-10.5	10YR 6/1	90	10YR 3/1	10				
10.5-13	10YR 4/1	85	10YR 2/1	15			Sandy	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils³:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Barrier Islands 1 cm Muck (S12)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)	
<input type="checkbox"/> Black Histic (A3)	(MLRA 153B, 153D)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	(outside MLRA 150A)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> ? Reduced Vertic (F18)	
<input type="checkbox"/> Organic Bodies (A6) (LRR, P, T, U)	<input type="checkbox"/> Depleted Matrix (F3)	(outside MLRA 150A, 150B)	
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T)	
<input checked="" type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)	
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Redox Depressions (F8)	(MLRA 153B)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Marl (F10) (LRR U)	<input type="checkbox"/> Red Parent Material (F21)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	<input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	(MLRA 153B, 153D)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)		
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)		
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)		
<input type="checkbox"/> Polyvalue Below Surface (S8)	(MLRA 149A, 153C, 153D)		
(LRR S, T, U)			

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):	
Type: <u>Water table</u>	
Depth (inches): <u>13</u>	Hydric Soil Present? Yes <u>X</u> No <u> </u>

Remarks:
 This data form is revised from Atlantic and Gulf Coastal Plain Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: BHT of Florida 4008 LLC City/County: St. Lucie Sampling Date: 04/04/2019
 Applicant/Owner: Ram Adar State: FL Sampling Point: P41
 Investigator(s): A. Eiseman, M. Brown Section, Township, Range: 32, 35S, 40E
 Landform (hillside, terrace, etc.): flatwoods Local relief (concave, convex, none): smooth/concave Slope (%): 0-2
 Subregion (LRR or MLRA): LRR U Lat: 27° 23' 40.689" Long: -80° 21' 23.047" Datum: NAD83
 Soil Map Unit Name: 43-SUSANNA AND WAUCHULA SANDS NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present?	Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present?	Yes <u> </u> No <u>X</u>	
Remarks:		

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u> </u> Primary Indicators (minimum of one is required; check all that apply)</p> <table style="width: 100%;"> <tr> <td style="width: 50%;"><u> </u> Surface Water (A1)</td> <td style="width: 50%;"><u> </u> Aquatic Fauna (B13)</td> </tr> <tr> <td><u> </u> High Water Table (A2)</td> <td><u> </u> Marl Deposits (B15) (LRR U)</td> </tr> <tr> <td><u> </u> Saturation (A3)</td> <td><u> </u> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td><u> </u> Water Marks (B1)</td> <td><u> </u> Oxidized Rhizospheres on Living Roots (C3)</td> </tr> <tr> <td><u> </u> Sediment Deposits (B2)</td> <td><u> </u> Presence of Reduced Iron (C4)</td> </tr> <tr> <td><u> </u> Drift Deposits (B3)</td> <td><u> </u> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td><u> </u> Algal Mat or Crust (B4)</td> <td><u> </u> Thin Muck Surface (C7)</td> </tr> <tr> <td><u> </u> Iron Deposits (B5)</td> <td><u> </u> Other (Explain in Remarks)</td> </tr> <tr> <td><u> </u> Inundation Visible on Aerial Imagery (B7)</td> <td></td> </tr> <tr> <td><u> </u> Water-Stained Leaves (B9)</td> <td></td> </tr> </table>	<u> </u> Surface Water (A1)	<u> </u> Aquatic Fauna (B13)	<u> </u> High Water Table (A2)	<u> </u> Marl Deposits (B15) (LRR U)	<u> </u> Saturation (A3)	<u> </u> Hydrogen Sulfide Odor (C1)	<u> </u> Water Marks (B1)	<u> </u> Oxidized Rhizospheres on Living Roots (C3)	<u> </u> Sediment Deposits (B2)	<u> </u> Presence of Reduced Iron (C4)	<u> </u> Drift Deposits (B3)	<u> </u> Recent Iron Reduction in Tilled Soils (C6)	<u> </u> Algal Mat or Crust (B4)	<u> </u> Thin Muck Surface (C7)	<u> </u> Iron Deposits (B5)	<u> </u> Other (Explain in Remarks)	<u> </u> Inundation Visible on Aerial Imagery (B7)		<u> </u> Water-Stained Leaves (B9)		<p>Secondary Indicators (minimum of two required)</p> <p><u> </u> Surface Soil Cracks (B6)</p> <p><u> </u> Sparsely Vegetated Concave Surface (B8)</p> <p><u> </u> Drainage Patterns (B10)</p> <p><u> </u> Moss Trim Lines (B16)</p> <p><u> </u> Dry-Season Water Table (C2)</p> <p><u> </u> Crayfish Burrows (C8)</p> <p><u> </u> Saturation Visible on Aerial Imagery (C9)</p> <p><u> </u> Geomorphic Position (D2)</p> <p><u> </u> Shallow Aquitard (D3)</p> <p><u> </u> FAC-Neutral Test (D5)</p> <p><u> </u> Sphagnum Moss (D8) (LRR T,U)</p>
<u> </u> Surface Water (A1)	<u> </u> Aquatic Fauna (B13)																				
<u> </u> High Water Table (A2)	<u> </u> Marl Deposits (B15) (LRR U)																				
<u> </u> Saturation (A3)	<u> </u> Hydrogen Sulfide Odor (C1)																				
<u> </u> Water Marks (B1)	<u> </u> Oxidized Rhizospheres on Living Roots (C3)																				
<u> </u> Sediment Deposits (B2)	<u> </u> Presence of Reduced Iron (C4)																				
<u> </u> Drift Deposits (B3)	<u> </u> Recent Iron Reduction in Tilled Soils (C6)																				
<u> </u> Algal Mat or Crust (B4)	<u> </u> Thin Muck Surface (C7)																				
<u> </u> Iron Deposits (B5)	<u> </u> Other (Explain in Remarks)																				
<u> </u> Inundation Visible on Aerial Imagery (B7)																					
<u> </u> Water-Stained Leaves (B9)																					
<p>Field Observations:</p> <table style="width: 100%;"> <tr> <td>Surface Water Present?</td> <td>Yes <u> </u> No <u>X</u></td> <td>Depth (inches): <u> </u></td> </tr> <tr> <td>Water Table Present?</td> <td>Yes <u> </u> No <u>X</u></td> <td>Depth (inches): <u> </u></td> </tr> <tr> <td>Saturation Present?</td> <td>Yes <u> </u> No <u>X</u></td> <td>Depth (inches): <u> </u></td> </tr> </table> <p>(includes capillary fringe)</p>	Surface Water Present?	Yes <u> </u> No <u>X</u>	Depth (inches): <u> </u>	Water Table Present?	Yes <u> </u> No <u>X</u>	Depth (inches): <u> </u>	Saturation Present?	Yes <u> </u> No <u>X</u>	Depth (inches): <u> </u>	<p>Wetland Hydrology Present? Yes <u> </u> No <u>X</u></p>											
Surface Water Present?	Yes <u> </u> No <u>X</u>	Depth (inches): <u> </u>																			
Water Table Present?	Yes <u> </u> No <u>X</u>	Depth (inches): <u> </u>																			
Saturation Present?	Yes <u> </u> No <u>X</u>	Depth (inches): <u> </u>																			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:																					
Remarks:																					

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: P41

Tree Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ = Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Sapling Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ = Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Shrub Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ = Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Herb Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Spermacoce verticillata</u>	<u>5</u>	<u>No</u>	<u>UPL</u>
2. <u>Urena lobata</u>	<u>5</u>	<u>No</u>	<u>FAC</u>
3. <u>Eupatorium capillifolium</u>	<u>5</u>	<u>No</u>	<u>FACU</u>
4. <u>Sida cordifolia</u>	<u>25</u>	<u>Yes</u>	<u>UPL</u>
5. <u>Sporobolus jacquemontii</u>	<u>60</u>	<u>Yes</u>	<u>FACU</u>
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
_____ = Total Cover			
50% of total cover: <u>50</u> 20% of total cover: <u>20</u>			

Woody Vine Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
_____ = Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>5</u>	x 3 = <u>15</u>
FACU species <u>65</u>	x 4 = <u>260</u>
UPL species <u>30</u>	x 5 = <u>150</u>
Column Totals: <u>100</u> (A)	<u>425</u> (B)
Prevalence Index = B/A = <u>4.25</u>	

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody Vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present?

Yes	<u> </u>	No	<u>X</u>
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Remarks: (If observed, list morphological adaptations below.)

SOIL

Sampling Point: P41

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6.5	10YR 5/1	95	10YR 3/2	5			Sandy	FILL
6.5-10.5	10YR 3/2	80	10YR 8/1	10			Sandy	FILL
			10YR 5/3	10				
10.5-12	10YR 8/1	65	10YR 3/2	20			Sandy	FILL
			10YR 5/3	15				

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U)
- Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12)
- Black Histic (A3) **(MLRA 153B, 153D)**
- Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O)
- Stratified Layers (A5) Loamy Gleyed Matrix (F2)
- Organic Bodies (A6) (LRR, P, T, U) Depleted Matrix (F3)
- 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6)
- Muck Presence (A8) (LRR U) Depleted Dark Surface (F7)
- 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8)
- Depleted Below Dark Surface (A11) Marl (F10) (LRR U)
- Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151)
- Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T)
- Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U)
- Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151)
- Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B)
- Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A)
- Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20)
- Polyvalue Below Surface (S8) **(MLRA 149A, 153C, 153D)**
- (LRR S, T, U)**

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Coast Prairie Redox (A16) **(outside MLRA 150A)**
- Reduced Vertic (F18) **(outside MLRA 150A, 150B)**
- Piedmont Floodplain Soils (F19) (LRR P, T)
- Anomalous Bright Floodplain Soils (F20) **(MLRA 153B)**
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Barrier Islands Low Chroma Matrix (TS7) **(MLRA 153B, 153D)**
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Rock refusal
 Depth (inches): 12

Hydric Soil Present? Yes No

Remarks:

This data form is revised from Atlantic and Gulf Coastal Plain Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: BHT of Florida 4008 LLC City/County: St. Lucie Sampling Date: 04/04/2019
 Applicant/Owner: Ram Adar State: FL Sampling Point: P42
 Investigator(s): A. Eiseman, M. Brown Section, Township, Range: 32, 35S, 40E
 Landform (hillside, terrace, etc.): flatwoods Local relief (concave, convex, none): smooth/concave Slope (%): 0-2
 Subregion (LRR or MLRA): LRR U Lat: 27° 23' 40.816 Long: -80° 21' 23.376" Datum: NAD83
 Soil Map Unit Name: 43-SUSANNA AND WAUCHULA SANDS NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: Taken within OSW	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Aquatic Fauna (B13) <u>X</u> High Water Table (A2) ___ Marl Deposits (B15) (LRR U) <u>X</u> Saturation (A3) ___ Hydrogen Sulfide Odor (C1) ___ Water Marks (B1) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Sediment Deposits (B2) ___ Presence of Reduced Iron (C4) ___ Drift Deposits (B3) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Algal Mat or Crust (B4) ___ Thin Muck Surface (C7) ___ Iron Deposits (B5) ___ Other (Explain in Remarks) ___ Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9)	Secondary Indicators (minimum of two required) ___ 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) <u>X</u> FAC-Neutral Test (D5) ___ Sphagnum Moss (D8) (LRR T,U)
Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>9</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: P42

Tree Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ =Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Sapling Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ =Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Shrub Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ =Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Herb Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Ludwigia peruviana</u>	<u>65</u>	<u>Yes</u>	<u>OBL</u>
2. <u>Cyperus articulatus</u>	<u>10</u>	<u>No</u>	<u>OBL</u>
3. <u>Salvinia minima</u>	<u>30</u>	<u>Yes</u>	<u>OBL</u>
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
_____ =Total Cover			
50% of total cover: <u>53</u> 20% of total cover: <u>21</u>			

Woody Vine Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
_____ =Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>105</u>	x 1 = <u>105</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>105</u> (A)	<u>105</u> (B)
Prevalence Index = B/A = <u>1.00</u>	

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

_____ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody Vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No _____

Remarks: (If observed, list morphological adaptations below.)

SOIL

Sampling Point: P42

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 2/1	100					Muck	
2-6	10YR 3/1	80	10YR 6/2	20			Sandy	
6-10	10YR 5/2	75	10YR 3/2	25			Sandy	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U)
- Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12)
- Black Histic (A3) **(MLRA 153B, 153D)**
- Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O)
- Stratified Layers (A5) Loamy Gleyed Matrix (F2)
- Organic Bodies (A6) (LRR, P, T, U) Depleted Matrix (F3)
- 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6)
- Muck Presence (A8) (LRR U) Depleted Dark Surface (F7)
- 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8)
- Depleted Below Dark Surface (A11) Marl (F10) (LRR U)
- Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151)
- Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T)
- Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U)
- Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151)
- Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B)
- Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A)
- Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20)
- Polyvalue Below Surface (S8) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Coast Prairie Redox (A16) **(outside MLRA 150A)**
- ? Reduced Vertic (F18) **(outside MLRA 150A, 150B)**
- Piedmont Floodplain Soils (F19) (LRR P, T)
- Anomalous Bright Floodplain Soils (F20) **(MLRA 153B)**
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Barrier Islands Low Chroma Matrix (TS7) **(MLRA 153B, 153D)**
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Rock refusal
 Depth (inches): 10

Hydric Soil Present? Yes No

Remarks:

This data form is revised from Atlantic and Gulf Coastal Plain Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)