

WETLAND DELINEATION

Site AP-13

Stennis Airport, Hancock County, Mississippi

Prepared for:

Hancock County Port & Harbor Commission

Date:

February 9, 2022

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I Scope and Purpose

This report provides an opinion on the presence and potential extent of jurisdictional Wetlands and/or Other Waters of the United States (U.S.) within the subject site. Only the U.S. Army Corps of Engineers (USACE) can make an official determination of Wetlands and Other Waters of the U.S. or regulatory jurisdiction over property.

This wetlands delineation was completed in accordance with the requirements of the USACE 1987 Wetland Delineation Manual and the specifications found in the latest appropriate USACE guidelines, the USACE Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coast Plain Region (Version 2.0) and can be used to assist USACE personnel in rendering a determination of the Wetland and Other Waters of the U.S. status of the site.

The USACE and the Environmental Protection Agency define wetlands as “areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.” The three diagnostic characteristics a site must exhibit to be classified as wetlands by the USACE are hydric soils, a prevalence of hydrophytic vegetation, and wetland hydrology.

2 Project Location and Boundaries

2.1 Site Location

The site is located at Stennis Airport between the airfield and Fred and Al Key Road in Kiln, Mississippi. Coordinates for the center of the site are 30.378523°N and -89.450770°W. The total site area is calculated at 3.09 acres (ac.). Figure I in Appendix A shows the vicinity and location of the site.

2.2 Site Description

The site consists of partially developed land that contains previously approved fill under USACE SAM-2010-01522-PAH adjacent to the Stennis airfield, hangars, and runway. The surrounding area includes commercial development, agriculture, and undeveloped land.

3 Methodology

3.1 Preliminary Data Analysis

Prior to conducting fieldwork, Cypress compiled spatial data to determine the probable location of wetland and nonwetland areas across the site. Spatial data included:

- USGS 7.5-minute topographic
- USDA Soil Survey
- USGS National Hydrography Dataset
- Historic Aerial Imagery

3.1.1 USGS 7.5-minute Topographic Map

Site specific elevation and geomorphic characteristics are shown in the USGS topographic map (Appendix A, Figure 2).

3.1.2 USDA Soil Series

Two soil types were identified within the site. Atmore silt loam, 0-2% slopes, and Beauregard silt loam are listed as hydric by the Natural Resources Conservation Service in Hancock County. The soil types are summarized in Table 1 and mapped in Figure 3 (Appendix A).

Table 1: USDA Soils

Soil Unit Name	Symbol	% Slope	% Hydric	Drainage Class	Parent Material
Atmore silt loam	At	0-2%	85%	Poorly drained	Silty alluvium over fine-loamy alluvium derived from sedimentary rock
Beauregard silt loam	Be	0-1%	9%	Moderately well drained	Loamy alluvium

3.1.3 USGS National Hydrography Dataset

The United States Geologic Survey (USGS) National Hydrography Dataset does not show hydrologic features within the site, but it does show a feature approximately 514 feet west of the site. The location of the hydrographic data is shown in Figure 4 (Appendix A).

3.2 Field Survey

Fieldwork was performed during a site visit on February 8, 2022, to collect sample points to characterize onsite wetland and nonwetland conditions. At each sample point, hydrology, vegetation, and soils were characterized and documented.

Wetland determinations were made using the observable vegetation, hydrology, and soils in accordance with the standard approach described in the USACE Wetland Delineation Manual (1987) and the Regional Supplement to the USACE Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (2010). Wetland boundaries and locations were surveyed and located by a handheld global positioning system (GPS) device (Trimble Geo7x). All potential wetland feature boundaries were defined using pin flags.

Regional supplement datasheets were completed at each data point location in representative areas within the wetland and nonwetland areas and are provided in Appendix B. Areas which met all three hydric criteria were considered a wetland.

After fieldwork was completed, data was entered into GIS software (ArcMap 10.8.1), the potentially jurisdictional areas were mapped, and areas and lengths were calculated.

4 Survey Findings

4.1 Soils

Soils observed and characterized onsite were found to be consistent with the mapped USDA soils. Detailed descriptions of soils characterized in proposed wetland and nonwetland areas are in the sample point datasheets in Appendix B of this report.

4.2 Vegetation

The site is characterized as maintained lawn. A detailed description of vegetation across the site is in the sample point datasheet in Appendix B.

4.2.1 Maintained Lawn

The maintained lawn is dominated by *Paspalum urvillei* and *Eleocharis baldwinii*. *Phyla nodiflora*, *Stenotaphrum secundatum*, *Trifolium pratense*, *Juncus effusus*, *Tradescantia virginiana*, *Alternanthera philoxeroides*, *Hydrocotyle umbellata*, *Hypochaeris glabra*, and *Dichondra carolinensis* were also present. The tree, sapling/shrub, and vine strata were not present.

4.3 Hydrology

Hydrology indicators found in proposed wetland areas of the site include:

- Saturation
- Algal Mat or Crust
- Oxidized Rhizospheres along Living Roots
- Thin Muck Surface

5 Conclusion

5.1 Wetlands

Evidence observed and documented indicates that portions of the site meet the established criteria to be considered wetlands. The evidence for this determination includes identification of dominant plant species, the examination and documentation of soil samples, and the presence of primary and/or secondary wetland hydrology indicators.

Based on field observations, sample point characterizations, soil surveys, aerial photography, elevation data, hydrologic data, and topographic data, Cypress mapped the proposed wetland delineation boundaries shown in Appendix A, Figure 5. The total proposed wetland area covers 0.44 acres comprised of five wetland features. Appendix C contains photos of the wetland feature onsite.

The wetlands identified within the site are summarized in Table 2.

Table 2: Wetlands Identified Within the Site

FS Number	Feature Type	Length (ft.)	Acres	Latitude	Longitude
Wetland 1	Wetland	n/a	0.04	30.378900°	-89.451300°
Wetland 2	Wetland	n/a	0.03	30.378300°	-89.451300°
Wetland 3	Wetland	n/a	0.02	30.378800°	-89.450500°
Wetland 4	Wetland	n/a	0.09	30.378300°	-89.450500°
Wetland 5	Wetland	n/a	0.24	30.378000°	-89.450700°

6 References

- Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey <http://websoilsurvey.sc.egov.usda.gov/>. Accessed 10/19/2020.
- USACE. Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1. U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.
- USACE. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain (Version 2.0)*. ed. Wakeley JS, Lichvar RW and Noble CV. EDRC/ EL TR- 10-20. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- USDA. Natural Resource Conservation Service (NRCS). 2006. *Field Indicators of the Hydric Soils in the United States*. Version 6.0. ed. Hurt GS and Vasilas LM. USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils.
- USDA, NRCS. 2006. *Land Resource Regions and Major Land Resource Areas of the United States, the Caribbean, and the Pacific Basin*. U.S. Department of Agriculture Handbook 296.
- United States Fish and Wildlife Service. May 2019. *National Wetland Inventory Map Electronic Data*.

Appendix A: Figures



0 0.25 0.5
Miles

Coordinate System:
NAD 1983 State Plane
Mississippi East FIPS 2301 Feet

HANCOCK COUNTY PORT & HARBOR
COMMISSION
SITE AP-13

Stennis Airport, Hancock County, MS

SITE VICINITY

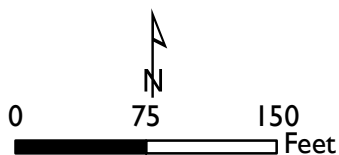
FIGURE I





Legend

 Project Boundary

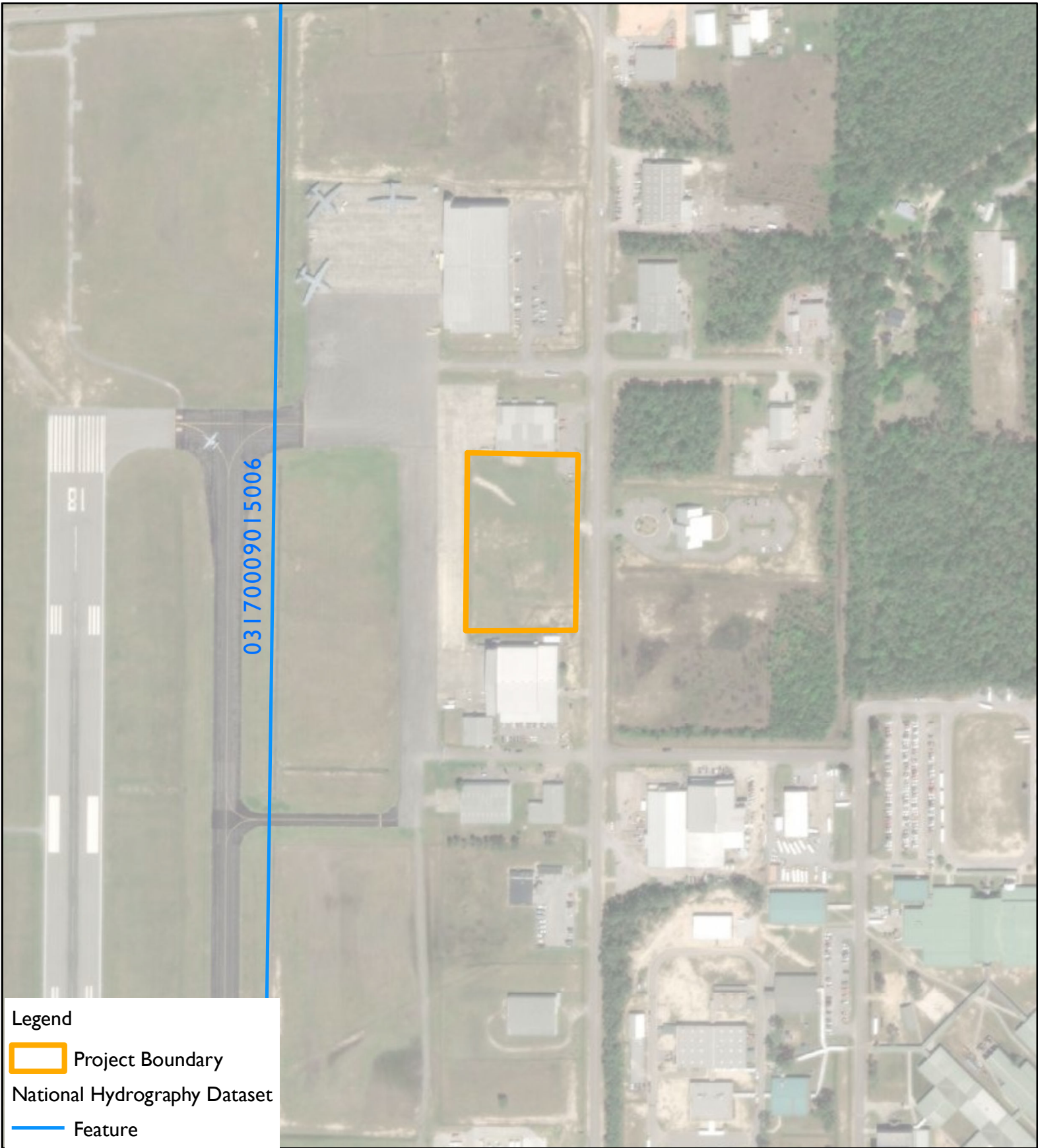


Coordinate System:
NAD 1983 StatePlane Mississippi
East FIPS 2301 Feet

HANCOCK COUNTY PORT & HARBOR
COMMISSION
SITE AP-13
Stennis Airport, Hancock County, MS
USDA MAPPED SOILS

FIGURE 3

CYPRESS
Environment & Infrastructure



Legend

 Project Boundary

National Hydrography Dataset

 Feature

0 250 500 Feet

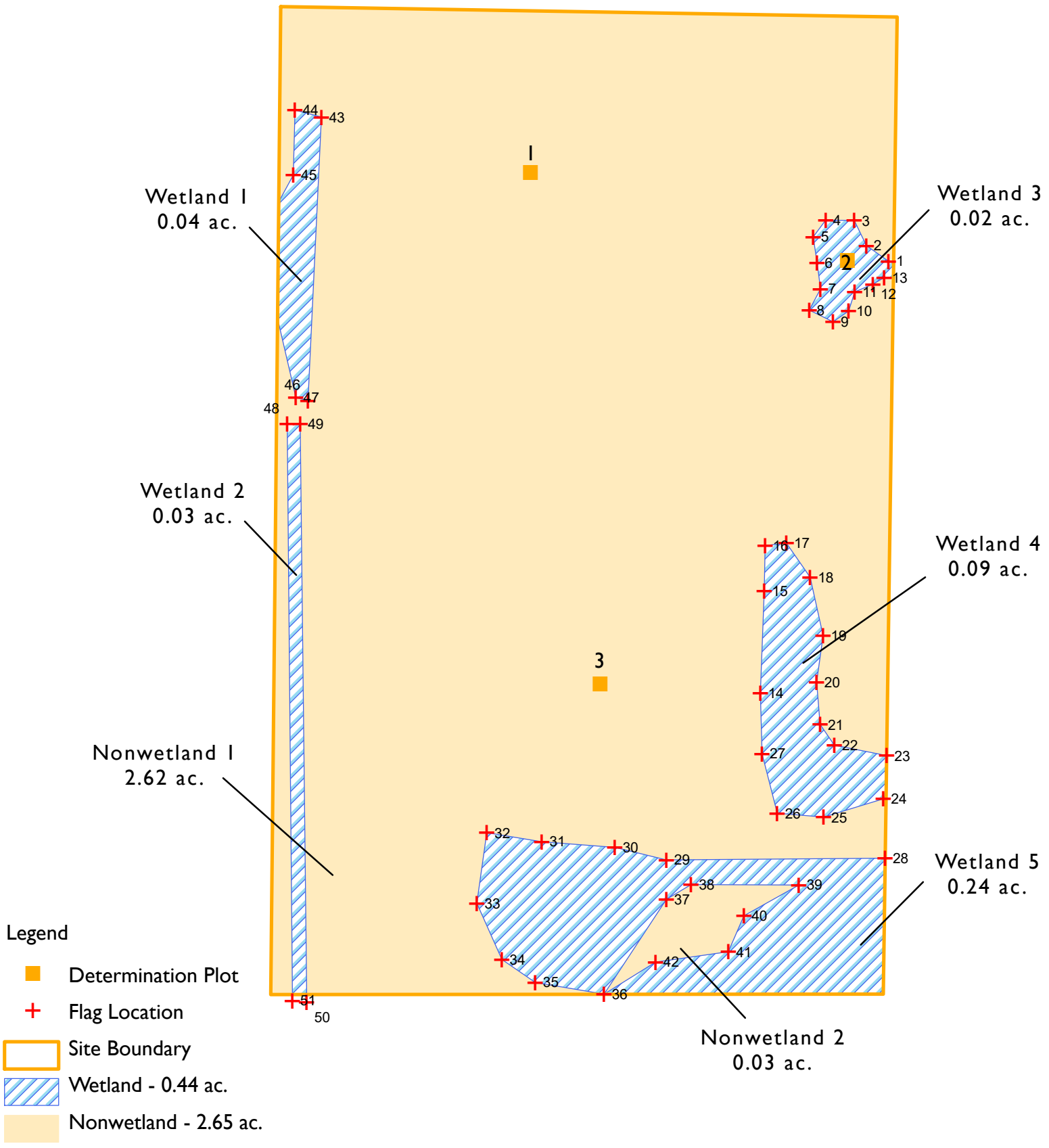
Coordinate System:
NAD 1983 StatePlane Mississippi
East FIPS 2301 Feet

HANCOCK COUNTY PORT & HARBOR
COMMISSION
SITE AP-13
Stennis Airport, Hancock County, MS

USGS NATIONAL HYDROGRAPHY
DATASET

FIGURE 4

CYPRESS
Environment & Infrastructure



HANCOCK COUNTY PORT & HARBOR
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SITE AP-13
Stennis Airport, Hancock County, MS

WETLAND DELINEATION

FIGURE 5

CYPRESS
Environment & Infrastructure

Appendix B: Data Sheets

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Site AP-13 City/County: Stennis Airport, Hancock County, Mississippi Sampling Date: 2/8/2022
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: 1
 Investigator(s): Autry Akins, Beth Beals Section, Township, Range: Section 1, Township 8S, Range 15W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 1
 Subregion (LRR or MLRA): MRLA 259 LRR T Lat: 30.379000 Long: -89.451000 Datum: WGS84
 Soil Map Unit Name: Atmore silt loam, 0 to 2% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil X, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 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 _____ Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: Site was previously filled under USACE SAM-2010-01522-PAH.	

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) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☐ Oxidized Rhizospheres along 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) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Site is disturbed with previously permitted fill and maintained by mowing.		

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

 Sampling Point: 1

Tree Stratum (Plot size: <u>15FT</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>None</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
50% of total cover: _____ 20% of total cover: _____				
Sapling/Shrub Stratum (Plot size: <u>15FT</u>)				
1. <u>None</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover: _____ 20% of total cover: _____				
Herb Stratum (Plot size: <u>15FT</u>)				
1. <u>Paspalum urvillei</u>	<u>90</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Unknown species</u>	<u>5</u>	<u>No</u>		
3. <u>Hydrocotyle umbellata</u>	<u>2</u>	<u>No</u>	<u>OBL</u>	
4. <u>Hypochaeris glabra</u>	<u>2</u>	<u>No</u>		
5. <u>Dichondra carolinensis</u>	<u>2</u>	<u>No</u>	<u>FAC</u>	
_____ = Total Cover				
50% of total cover: <u>50.5</u> 20% of total cover: <u>20.2</u>				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
Woody Vine Stratum (Plot size: <u>15FT</u>)				
1. <u>None</u>				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Remarks: (If observed, list morphological adaptations below). Hypochaeris glabra does not have a wetland indicator status. Site is disturbed with previously permitted fill and maintained by mowing.				Hydrophytic Vegetation Present? Yes <u>X</u> No _____

SOIL

Sampling Point: 1**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		
0-16	10YR5/3	70	10YR5/2	30	C	M	Loamy clay	

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)
☐ 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 Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
☐ 2 cm Muck (A10) (LRR S)
☐ Reduced Vertic (F18) (outside MLRA 150A,B)
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
☐ Anomalous Bright Loamy Soils (F20)
(MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Site contains permitted fill from permit SAM-2010-01522-PAH.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Site AP-13 City/County: Stennis Airport, Hancock County, Mississippi Sampling Date: 2/8/2022
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: 2
 Investigator(s): Autry Akins, Beth Beals Section, Township, Range: Section 1, Township 8S, Range 15W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 1
 Subregion (LRR or MLRA): MRLA 259 LRR T Lat: 30.378900 Long: -89.450500 Datum: WGS84
 Soil Map Unit Name: Atmore silt loam, 0 to 2% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil X, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 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 _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: Site was previously filled under USACE SAM-2010-01522-PAH.	

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) ☒ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☒ Oxidized Rhizospheres along 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) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

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

 Sampling Point: 2

Tree Stratum (Plot size: <u>15FT</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>None</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☐ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☒ Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover: _____ 20% of total cover: _____				
Sapling/Shrub Stratum (Plot size: <u>15FT</u>)				
1. <u>None</u>				
2. _____				
3. _____				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Herb Stratum (Plot size: <u>15FT</u>)				
1. <u>Eleocharis baldwinii</u>	<u>70</u>	<u>Yes</u>	<u>OBL</u>	
2. <u>Paspalum urvillei</u>	<u>25</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
3. <u>Stenotaphrum secundatum</u>	<u>15</u>	<u>No</u>	<u>FAC</u>	
4. <u>Trifolium pratense</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	
5. <u>Juncus effusus</u>	<u>5</u>	<u>No</u>	<u>OBL</u>	
6. <u>Tradescantia virginiana</u>	<u>2</u>	<u>No</u>	<u>FAC</u>	
7. <u>Alternanthera philoxeroides</u>	<u>2</u>	<u>No</u>	<u>OBL</u>	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
_____ = Total Cover				
50% of total cover: <u>62</u> 20% of total cover: <u>24.8</u>				
Woody Vine Stratum (Plot size: <u>15FT</u>)				
1. <u>None</u>				
2. _____				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
3. _____				
4. _____				
5. _____				
6. _____				
_____ = Total Cover				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
50% of total cover: _____ 20% of total cover: _____				
Remarks: (If observed, list morphological adaptations below).				
Site is disturbed with previously permitted fill and maintained by mowing.				

SOIL

Sampling Point: 2

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		
0-13	10YR4/1	90	10YR5/8	10	C	M	Clay loam	
13-16	10YR4/1	95	10YR5/6	5	C	M	Clay loam	

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

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
☐ 2 cm Muck (A10) (LRR S)
☐ Reduced Vertic (F18) (outside MLRA 150A,B)
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
☐ Anomalous Bright Loamy Soils (F20)
(MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Site AP-13 City/County: Stennis Airport, Hancock County, Mississippi Sampling Date: 2/8/2022
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: 3
 Investigator(s): Autry Akins, Beth Beals Section, Township, Range: Section 1, Township 8S, Range 15W
 Landform (hillslope, terrace, etc.): Filled area Local relief (concave, convex, none): Convex Slope (%): 0
 Subregion (LRR or MLRA): MRLA 259 LRR T Lat: 30.378300 Long: -89.450800 Datum: WGS84
 Soil Map Unit Name: Beauregard silt loam, 0 to 1% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil X, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 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 _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks: Site was previously filled under USACE SAM-2010-01522-PAH.	

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) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☐ Oxidized Rhizospheres along 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) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Site is disturbed with previously permitted fill and maintained by mowing.		

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

 Sampling Point: 3

Tree Stratum (Plot size: <u>15FT</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>None</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
50% of total cover: _____ 20% of total cover: _____				
Sapling/Shrub Stratum (Plot size: <u>15FT</u>)				
1. <u>None</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover: _____ 20% of total cover: _____				
Herb Stratum (Plot size: <u>15FT</u>)				
1. <u>Paspalum urvillei</u>	<u>90</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Eleocharis baldwinii</u>	<u>5</u>	<u>No</u>	<u>OBL</u>	
3. <u>Phyla nodiflora</u>	<u>2</u>	<u>No</u>	<u>FAC</u>	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
_____ = Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
50% of total cover: <u>48.5</u> 20% of total cover: <u>19.4</u>				
Woody Vine Stratum (Plot size: <u>15FT</u>)				
1. <u>None</u>				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Remarks: (If observed, list morphological adaptations below). Site is disturbed with previously permitted fill and maintained by mowing.				

SOIL

Sampling Point: 3

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		
0-8	10YR5/3	90	10YR5/2	10	C	M	Clay loam	
8-16	10YR5/4	85	10YR6/8	10	C	M	Clay loam	
			10YR5/2	5	C	M	Clay loam	

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)**
- ☐ 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 Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Fill and aggregate present at sample plot.

Appendix C: Site Photographs

Site: AP-13	
Site Location: Hancock County, MS	
Photo No: 1	
Date: 2/8/2022	
Description: Nonwetland determination plot #1 looking north.	

Site: AP-13	
Site Location: Hancock County, MS	
Photo No: 2	
Date: 2/8/2022	
Description: Nonwetland determination plot #1 looking east.	

Site: AP-13	
Site Location: Hancock County, MS	
Photo No: 3	
Date: 2/8/2022	
Description: Nonwetland determination plot #1 looking south.	

Site: AP-13	
Site Location: Hancock County, MS	
Photo No: 4	
Date: 2/8/2022	
Description: Nonwetland determination plot #1 looking west.	

Site: AP-13	
Site Location: Hancock County, MS	
Photo No: 5	
Date: 2/8/2022	
Description: Wetland determination plot #2 looking north.	

Site: AP-13	
Site Location: Hancock County, MS	
Photo No: 6	
Date: 2/8/2022	
Description: Wetland determination plot #2 looking east.	

Site: AP-13

Site Location:
Hancock County, MS

Photo No:
7

Date:
2/8/2022

Description:
Wetland determination
plot #2 looking south.



Site: AP-13

Site Location:
Hancock County, MS

Photo No:
8

Date:
2/8/2022

Description:
Wetland determination
plot #2 looking west.



Site: AP-13	
Site Location: Hancock County, MS	
Photo No: 9	
Date: 2/8/2022	
Description: Nonwetland determination plot #3 looking north.	

Site: AP-13	
Site Location: Hancock County, MS	
Photo No: 10	
Date: 2/8/2022	
Description: Nonwetland determination plot #3 looking east.	

Site: AP-13	
Site Location: Hancock County, MS	
Photo No: 11	
Date: 2/8/2022	
Description: Nonwetland determination plot #3 looking south.	
Site: AP-13	
Site Location: Hancock County, MS	
Photo No: 12	
Date: 2/8/2022	
Description: Nonwetland determination plot #3 looking west.	

Site: AP-13	
Site Location: Hancock County, MS	
Photo No: 13	
Date: 2/8/2022	
Description: Previously permitted fill area looking northeast.	

Site: AP-13	
Site Location: Hancock County, MS	
Photo No: 14	
Date: 2/8/2022	
Description: Previously permitted fill area looking southeast.	