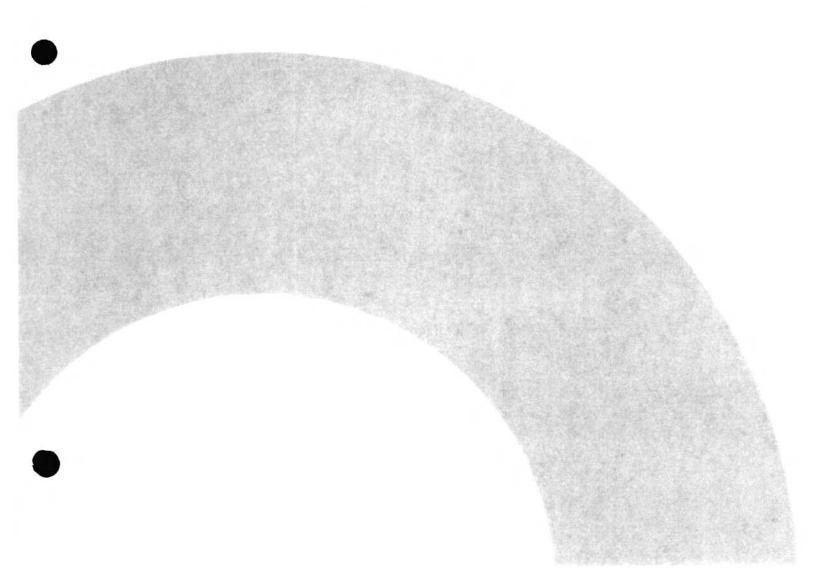
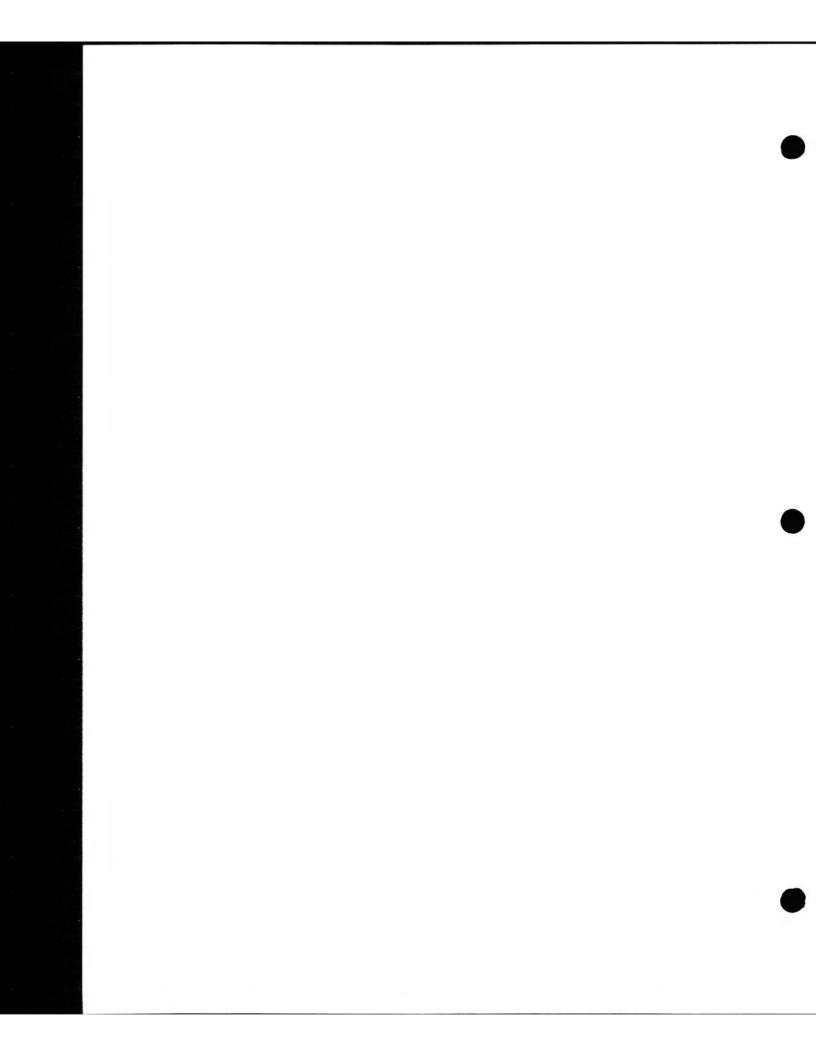
# Appendix G Wetlands Delineation Report







# WETLAND DELINEATION REPORT PORT OF CORPUS CHRISTI

Port of Corpus Christi
Harbor Island
Port Aransas
Nueces County, Texas
Project # 6703180051 Port of Corpus Christi Authority

Prepared for:

**Port of Corpus Christi** 

222 Power St, Corpus Christi, Texas

June 10, 2019

# WETLAND DELINEATION REPORT PORT OF CORPUS CHRISTI

Port of Corpus Christi Harbor Island Port Aransas Nueces County, Texas Project # 6703180051 Port of Corpus Christi Authority

#### Prepared for:

Port of Corpus Christi 222 Power St, Corpus Christi, Texas

#### Prepared by:

Wood Environment & Infrastructure Solutions, Inc. 17325 Park Row Houston, Texas 77084 T: 832-809-8000

6/10/2019

Vice President, Houston Branch

Charles R. Harman **Project Manager** 

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Appendix A	Photographs
Appendix B	Wetland Delineation Datasheets
Appendix C	List of Plant Species
Appendix D	Resumes of Field Personnel

#### **List of Acronyms and Abbreviations**

CCSC Corpus Christi Ship Channel

CFR Code of Federal Regulation

CWA Clean Water Act

DBH Diameter at Breast Height

FAC Facultative wetland plant

FACU Facultative upland plant

FACW Facultative wetland plant

FEMA Federal Emergency Management Agency

GIS Geographic Information Systems

NA Not Applicable

NI No Indicator

NL Not Listed

NRCS Natural Resource Conservation Service

NWI National Wetlands Inventory

OBL Obligate wetland plant

PCCA Port of Corpus Christi Authority

Site Harbor Island Project Site

TCEQ Texas Commission on Environmental Quality

UPL Upland plant

USACE United States Army Corps of Engineers

U.S.C. United States Code

USDA United States Department of Agriculture

USFWS United States Fish and Wildlife Service

Wood Wood Environment & Infrastructure Solutions

#### 1.0 Introduction

This Wetland Delineation Report has been prepared on behalf of the Port of Corpus Christi Authority (PCCA) by Wood Environment & Infrastructure Solutions, Inc. (Wood) for Harbor Island (the Site). The Site is located in Port Aransas, Nueces County, Texas (Figure 1). This wetland delineation was performed in support of the future application to the Texas Commission on Environmental Quality (TCEQ) and United States Corps of Engineers (USACE) for Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act for the construction of a crude oil export terminal and associated marine berths that will service Very Large Crude Carriers (VLCCs). This report presents a description of the Site, the methods used to perform the delineation, the findings of a desktop delineation, the findings of a field delineation and supporting documentation in the form of maps, photographs, notes, and wetland delineation datasheets.

#### 1.1 Site Description

The Project Area is located at the convergence of Aransas Pass, the Corpus Christi Ship Channel, and Lydia Ann Channel between Nueces and Aransas Counties, Texas. It is a 254-acre parcel identified by Nueces County as Property ID 2411473 and 241506 owned by PCCA. However, this delineation was conducted on a smaller portion of 127 acres of the parcel. The project is located on the portion of Harbor Island that is east of TX-361 and is bordered to the east by the Tributary of the Aransas Pass. The coordinates for the approximate center of the Site are presented in the table below.

Table 1-1: Coordinates for the Approximate Center of the Site Port of Corpus Christi, Corpus Christi, Nueces County, Texas

Latitude (North)	Longitude (West)	
27.846162	-97.065775	

Note: All coordinates are in presented in North American 1983 Datum.

. . .

#### 2.0 Methods

The CWA of 1977 (33 United States Code [U.S.C.] 1344) defines wetlands as "those areas that are inundated or saturated by surface or groundwater at a frequency or duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas" (33 Code of Federal Regulations [CFR] 230.3).

From this regulatory definition, a three-parameter approach (i.e., vegetation, soils, and hydrology) was developed by the USACE in order to identify and delineate wetland for purposes of Section 404 of the CWA and Section 10 of the Rivers and Harbors Act (33 U.S.C. 403). This approach dictates that areas meeting the defined criteria of hydrophytic vegetation, hydric soils, and wetland hydrology will be designated as jurisdictional wetlands. The three-parameter approach is described in the *Corps of Engineers Wetlands Delineation Manual*, often referred to as either the "Corps Manual" or the "87 Manual" (Environmental Laboratory, 1987). After the issuance of the Corps Manual, a series of Regional Supplements have been developed or are in various stages of development that are specific to regional wetland characteristics across the United States. These Regional Supplements are designed for use with, not as a replacement for, the current version of the Corps Manual.

For vegetation, the criteria mean that more than 50% of the composition of the dominant species from all strata must be categorized as hydrophytic or adapted to living in saturated areas. That is, the plant species must be classified as obligate, facultative wetland or facultative as defined in the *National List of Plant Species That Occur in Wetlands*, published by the United States Fish & Wildlife Service (USFWS). Soils are considered hydric if they meet the criteria defined by the National Technical Committee for Hydric Soils in *Hydric Soils of the United States* (United States Department of Agriculture [USDA], 1987). Wetland hydrology must be present to affect either permanent or periodic saturation of the soil.

The first criterion, hydrophytic vegetation, is present when a predominance of the plant species present in a community is either obligate, facultative wetland, or facultative. The USFWS has compiled data on the habitat characteristics of plants of the United States based on frequency of observation in various regions. This list categorizes plant species by their frequency of occurrence as follows:

**Obligate Wetland Plants (OBL):** Those species that occur almost exclusively in wetlands (>99 percent of the time)

**Facultative Wetland Plants (FACW):** Those species that usually occur in wetlands (67 - 99 percent of the time)

**Facultative Plants (FAC):** Those species equally likely to occur in wetland or non-wetland (34 - 66 percent of the time)

**Facultative Upland Plants (FACU):** Those species that usually occur in non-wetlands (67 - 99 percent of the time)

**Upland Plants (UPL):** Those species that occur almost exclusively in uplands (>99 percent of the time).

Species for which insufficient information is available for classification are listed in the USFWS list with a designation of No Indicator (NI) for regional status. A designation of Not Listed (NL) was assigned by Wood if a species was not present on the USFWS list. According to the "1989 Manual", plants not listed are presumed to be upland species. A designation of Not Applicable (NA) was assigned by Wood for vegetation that could not be identified to species level.

To accurately describe the vegetation at each sampling point, data on each horizontal strata or layer was collected. Vegetative strata for which dominants were determined included:

**Tree** (> 5.0 inches diameter at breast height [dbh] and 20 feet or taller)

Sapling (0.4 to < 5.0 inches dbh and 20 feet or taller)

**Shrub** (usually 3 to 20 feet tall, including multi-stemmed, bushy shrubs and small trees and saplings)

**Woody vine** (determined by morphological characteristics and botanical classification)

**Herb** (herbaceous plants, including graminoids, forbs, ferns, fern allies, herbaceous vines, and tree seedlings)

The dominant species was determined by making visual estimates of tree, sapling, shrub, woody vine, and herb strata and by assigning one of the following cover classes, with the midpoints of each cover class in parentheses:

T < 1 percent (0)	4 = 26-50 percent (38.0)
1 = 1-5 percent (3.0)	5 = 51-75 percent (63.0)
2 = 6-15 percent (10.5)	6 = 76-95 percent (85.5)
3 = 16-25 percent (20.5)	7 = 96-100  percent  (98.0)

The midpoints of each species were averaged at each sample point and ranked. The dominance threshold number was calculated and used to determine dominant species. Those species composing 50 percent of the total cover were considered to be the dominants, as were additional species representing 20 percent or more of the total cover class midpoint values for each stratum. The affinity of the dominant species to wetlands was used in determining the wetland status of each sample point.

A two-step process was used to determine the presence of hydric soils at each site. A preliminary desk-top assessment was first conducted that involved reviewing USDA Natural Resource Conservation Service (NRCS) soil maps and Geographic Information Systems (GIS) data. This desk-top assessment provided a coarse-scale examination of the potential locations for hydric soils on each site.

The second step of this process was the field examination of site soils. Soil borings were used to examine the nature of the soil below the "A" horizon. The hydric nature of soils can generally be determined by color changes resulting from the chemical reduction of soil components, which occurs because of extended periods of saturation or inundation. The Munsell Soil Color Charts were developed to assign values to these colors to simplify classification. The Munsell system uses three components in assigning color to a soil: hue, value, and chroma:

**Hue**: Related to one of the main spectral colors: red, yellow, green, blue, or purple, or various mixtures of these principal colors;

Value: Refers to the degree of lightness;

**Chroma**: Indicates the color strength or purity.

In mineral soils, two or more colors may exist within the same soil. The dominant color is referred to as the matrix while the less dominant is referred to as the mottle. Mottling tends to occur under fluctuating conditions of saturation. Mineral soils are considered hydric if the matrix chroma is 2 or less when mottling is present, or when the matrix chroma is 1 or less if no mottling is present. Other soil characteristics, such as high organic content, gleying, histic epipedons, sulfidic materials, aquic or peraquic moisture regime, root pore linings, and iron or manganese concretions, are also indicators of a hydric soil condition.

The last parameter, wetland hydrology, is present when inundation or saturation of the soil within 6 inches to 18 inches of the surface occurs for a minimum of 7 consecutive days during the growing season. In periods during which inundation or saturation is not present, field indicators are typically used to determine the presence of wetland hydrology. Wetland hydrology field indicators are grouped into two categories: primary indicators and secondary indicators. Primary indicators are typically considered to be robust indicators of wetland hydrology and include, but are not limited to, inundation and saturation (as noted above), water marks, drift lines, sediment deposits, and drainage patterns in the ground layer. Secondary indicators are relatively less robust and include, but are not limited to, the presence of a high frequency of oxidized root channels (i.e., pore linings) near the soil surface, water-stained leaves, local soil survey hydrology data, and various environmental or ecological indicators.

A desktop survey was conducted to develop a preliminary understanding of the possible extent of the wetlands in advance of the field delineation. The desktop survey included a review of available information, including USGS 7.5-foot quadrangle topographic maps, USFWS National Wetlands Inventory (NWI) maps, USDA NRCS soil maps and data, and aerial photographs of the Site.

In the field, wetland delineation involves determining the boundary line between the areas in which the three-wetland parameters are present and where they are not. Using perceived changes in elevation and vegetation as a guide, representative observation points were selected along the apparent border of any potential wetland areas. Soil borings were made to determine the presence of hydric soil and wetland hydrology at each of the observation points. Observations were made on both the suspect wetland and upland side. The boundary between the wetland

and upland was then identified and marked in the field with survey flagging. The field delineation was performed by a Wood wetland scientist on March 19, 2019.

#### 3.0 Results

This section presents the results of the desk-top delineation and the field delineation. **Appendix A** presents photographs of the Site, **Appendix B** presents the wetland delineation datasheets, **Appendix C** presents a list of plant species observed during the delineation effort, and **Appendix D** presents the resume of personnel involved with the field delineation.

Delineation was conducted using routine on-site determination method as described in 1987 Corps Manual. To capture the data points within the project a Trimble Pro XRS GPS unit was carried. This system is real-time GIS grade system with an accuracy of 1 foot horizontally and 1.5 feet vertically.

#### 3.1 USGS Topographic Map

A review of the USGS topographic map for the Site area indicates the nearest watercourses are the Aransas Channel to the east and The Corpus Christi Ship Channel (CCSC) to the south (**Figure 2**). The Site is approximately one mile from the Gulf of Meixco.

#### 3.2 USFWS NWI Map

A review of the USFWS NWI map for the Site indicates the presence of a freshwater emergent wetland habitat on the Site (**Figure 3**). The NWI map shows that the site is bordered to the south and east by estuarine and marine deepwater habitat. The freshwater emergent wetland habitat is located on the northwestern edge of the project boundary.

#### 3.3 USDA Soils

A review of the USDA NRCS soils map for the Site area indicates that Mustang fine sand, 0 to 1 percent slopes, occasionally flooded, frequently ponded occur on the Site (**Figure 4**):

Mustang fine sand (0 to 1 percent slopes) is the dominant soil mapping unit on this Site. Mustang fine sand is found in low areas alogn the coast and are marshy most of the time. This soil hosts abundant amount of native plants and is used as range for cattle. It is classified as poorly drained, negligible runoff class, and is considered hydric.

### 3.4 FEMA Floodplain Map

A review of the Federal Emergency Management Agency (FEMA) flooplain map for the Site area indicates that part of the site is in a Zone AE and Zone X flood zone (**Figure 5**). Zone AE is considered a 100-year flood location, while Zone X can be either a 500-year flood or outside a 500-year flood area.

Project # 6703180051 Port of Corpus Christi Authority | June 10, 2019

Page 6

#### 3.5 Field Wetland Delineation

The results of the field wetland delineation reveal that as of March 2019, the Site was composed of developed and distrubed lands and Persistent Emergent Wetlands (PEM).

Table 1-2: Coordinates for the Wetlands
Port of Corpus Christi, Corpus Christi, Nueces County, Texas

	Northing	Easting
Wetland 1	27.84694444	-97.06666
Wetland 2	27.84724100	-97.06696

Each of these communities is described below, and the wetland boundaries and upland points are depicted on **Figure 6**.

#### 3.5.1 PEM

Two PEMs were located on the site. One PEM was in a small drainage depression that is 0.0184 acres and a larger habitat that is .312 acres. Below is the description of each sample point of the two PEMs (**Figure 6**).

The first habitat (0.0184 acres) is located near a previously used parking area approximately 520 feet from CCSC (sampling point W18). This community was dominated by torpedograss (*Panicum repens*, FACW) and cone-cup spikerush (*Eleocharis tuberculosa*, OBL) in the herb stratum. No species were observed in the tree, sapling/shrub, or woody vine stratum. This community was considered to be a hydrophytic vegetation community due to the dominant species.

The representative soil boring collected from the community along the wetland revealed a 0 to 16-inch of 10YR 4/1 loamy sand with 1% distinct 7.5YR 5/8 redoximporhic features. This soil is considered to be hydric.

Field indicators of wetland hydrology observed in this community included surface water (maximum depth of 2 inches) and soil saturation in the upper 12 inches. A water table could not be determined due to the amount of saturation. Due to the dominance of hydrophitic vegetation, presence of hydric soil and wetland hydrology, this location is considered a wetland.

The second habitat (.312 Acres) is located in the central portion of the Site and is approximately 715 feet from the CCSC (sampling point 5). This community was dominated by torpedograss (*Panicum repens*, FACW). No species were observed in the tree, sapling/shrub, or woody vine stratum. This community was considered to be a hydrophytic vegetation community due to the dominant species.

The representative soil boring collected from the community along the wetland revealed a 0 to 13-inch 10YR 4/2 sandy clay surface strata, 3 to 12-inch 10YR 6/2 sand, and 12 to 16-inch 2.5YR 6/1 loamy sand. This soil is considered to be hydric.

Field indicators of wetland hydrology observed in this community included soil saturation in the upper 9 inches. Due to the dominance of hydrophitic vegetation, presence of hydric soil, and wetland hydrology, this location is considered a wetland.

#### 3.5.2 Developed and Disturbed Land

The developed and disturbed land community includes the paved areas (i.e. parking lot and roads). These areas are not vegetated and were not identified as wetland. This property has deconstruction activities being preformed at the time of this wetland delentiation. This involved scrap metal and large machines (backhoes and other vehicles assocated with construction services) being moved and stored on site.

### 4.0 Summary and Conclusion

A wetland delineation was conducted Harbor Island, Port Arthur, Nueces County, Texas. This wetland delineation was performed in support of the future application to the TCEQ and USACE for Section 404 of the CWA and Section 10 of the Rivers and Harbors Act for the construction of a crude oil export terminal servicing marine berths for VLCCs. The delineation identified the outer boundaries of wetlands as defined by the USACE for the entire property.

The Project Area is located at the convergence of Aransas Pass, the Corpus Christi Ship Channel, and Lydia Ann Channel between Nueces and Aransas Counties, Texas. It is a 254-acre parcel identified by Nueces County as Property ID 2411473 and 241506 owned by PCCA. The project location is located on the portion of Harbor Island that is east of TX-361 and is bordered to the east by the Tributary of the Aransas Pass The coordinates for the approximate center of the Site are presented in the table below.

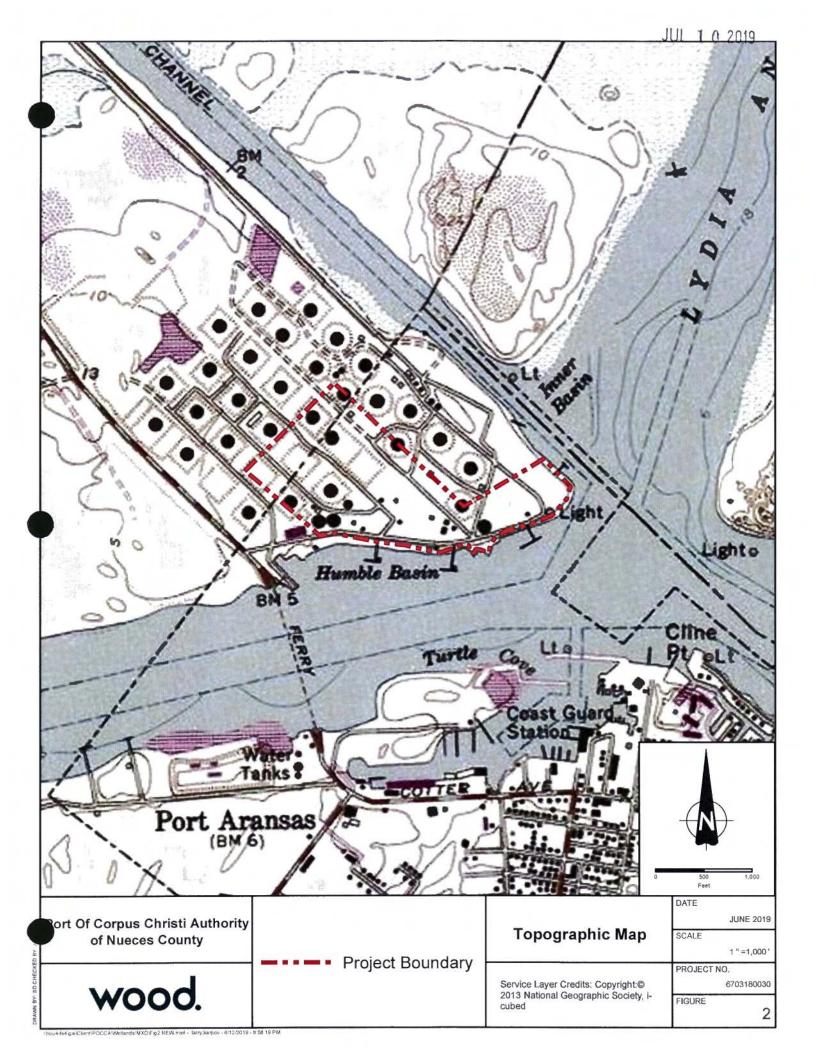
The results of a preliminary desktop delineation indicated that the site has one freshwater emergent wetland habitat and is bordered by estuarine and marine deep-water habitats. The identified two PEM wetland communities on the Site (**Figure 6**).

The smaller PEM (0.0184 acres) is located near a previously used parking area, approximately 520 feet from CCSC. The second, larger PEM The second habitat (.312 Acres) is located in the central portion of the Site and is approximately 715 feet from the CCSC. The results of this wetland delineation have not yet been reviewed by the any government authority, and as such, should be considered preliminary until confirmation of the boundaries and resource classification (i.e. ordinary, intermediate, and exceptional) has been received.

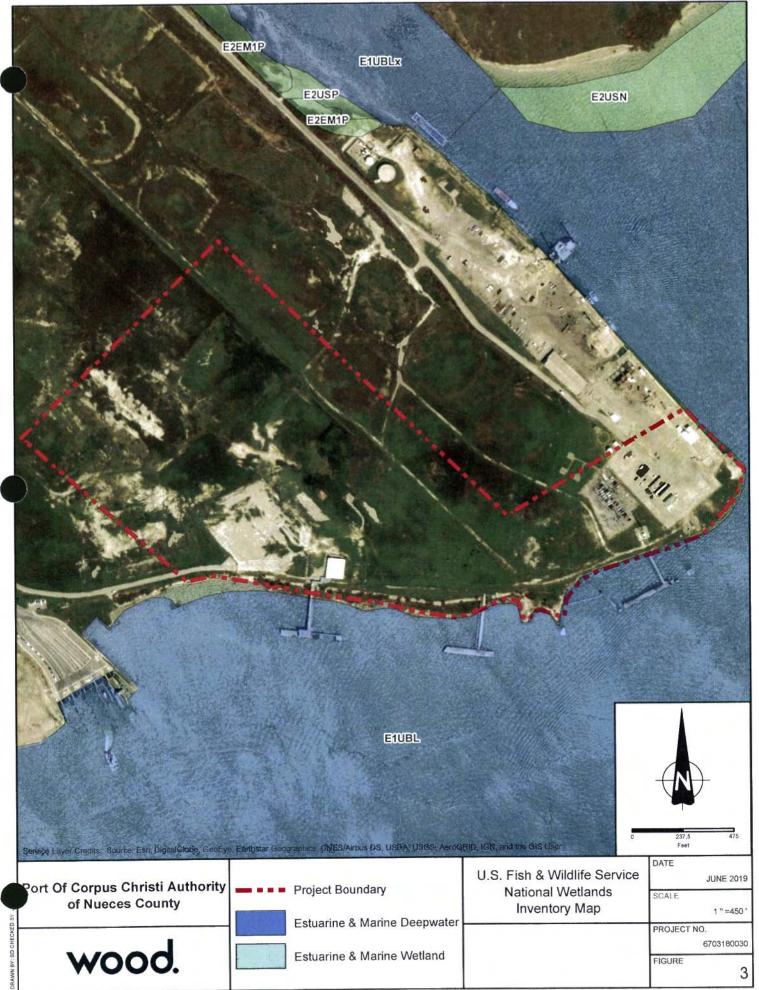
PORT OF CORPUS CHRISTI

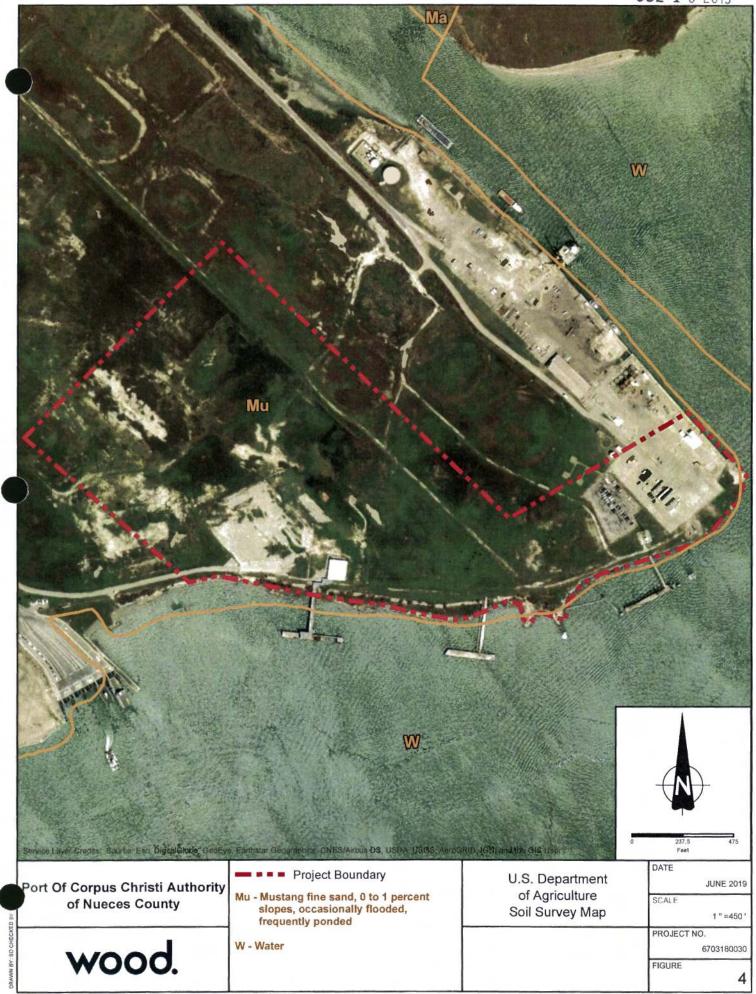
**FIGURES** 



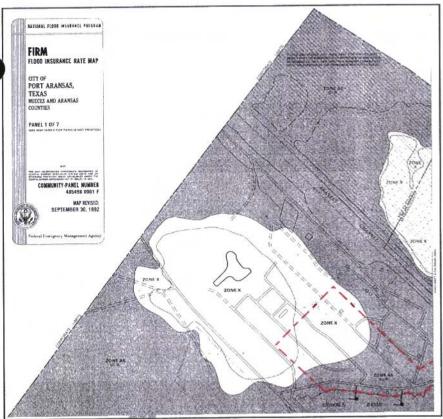


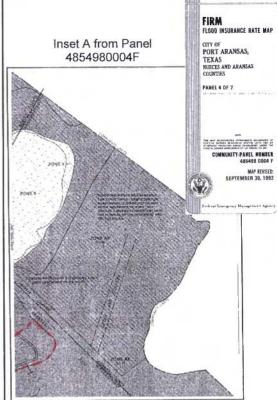
JUL 1 0 2019





NATIONAL FLOOD INSUBANCE PROCESAN





#### **LEGEND**

SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD
ZONE A No base flood elevations determined.

ZONE AE Base flood elevations determined.

ZONE VE Coastal flood with velocity hazard (wave action); base flood elevations determined.



OTHER FLOOD AREAS

OTHER AREAS

UNDEVELOPED COASTAL BARRIERS

Floodway Boundary Zone D Boundary

(EL 987) RM 7x Elevation Reference Mark eM1.5 \*Referenced to the National Geodetic Vertical Datum of 1929

This map is for use in administering the National Flood Insurance Program, does not necessarily identify all areas subject to flooding, particularly from its deriange sources of small size, or all plantimetric features ossisties Special Floor Hazard Areas. The community map repository should be consulted for possible updated flood hazard information prior to use of thin map for properly purchased.

NOTES

Coastal base flood elevations apply only landward of 0.0 NGVD, and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Areas of special flood hazard (100-year flood) include Zones A, AE, AH, AO, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

for adjoining map panels see separately printed Map Index

MAP REPOSITORY

Port Aransas City Hall, 710 West Avenue Way, Port Aransas, Texas 78373 (Maps available for reference only, not for distribution).

INITIAL IDENTIFICATION:

JUNE 26, 1971

FLOOD HAZARD BOUNDARY MAP REVISIONS: NONE

FLOOD INSURANCE RATE MAP EFFECTIVE: JUNE 26, 1971

FLOOD INSURANCE RATE MAP REVISIONS:

September 8, 1972 - to change base flood elevations November 23, 1973 - to add zones

July 1, 1974 - to change zone designations

August 13, 1976 - to reflect curvilinear flood boundary, to change community boundary, and to add special flood hazard areas

December 8, 1976 - to change base flood elevations

March 18, 1985 - to increase and decrease base flood elevations, to increase zone designations, to revise special flood hazard areas, and to revise corporate limits.

September 30, 1992 - to update corporate limits, to increase base flood elevations, to change special flood hexard areas, to update map format, to reflect updated topographic information and to add otherwise protected

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood insurance Program at (800) 638-6620.



Port Of Corpus Christi Authority of Nueces County

■ ■ ■ ■ Project Boundary

FEMA Floodplain Map

DATE JUNE 2019

SCALE

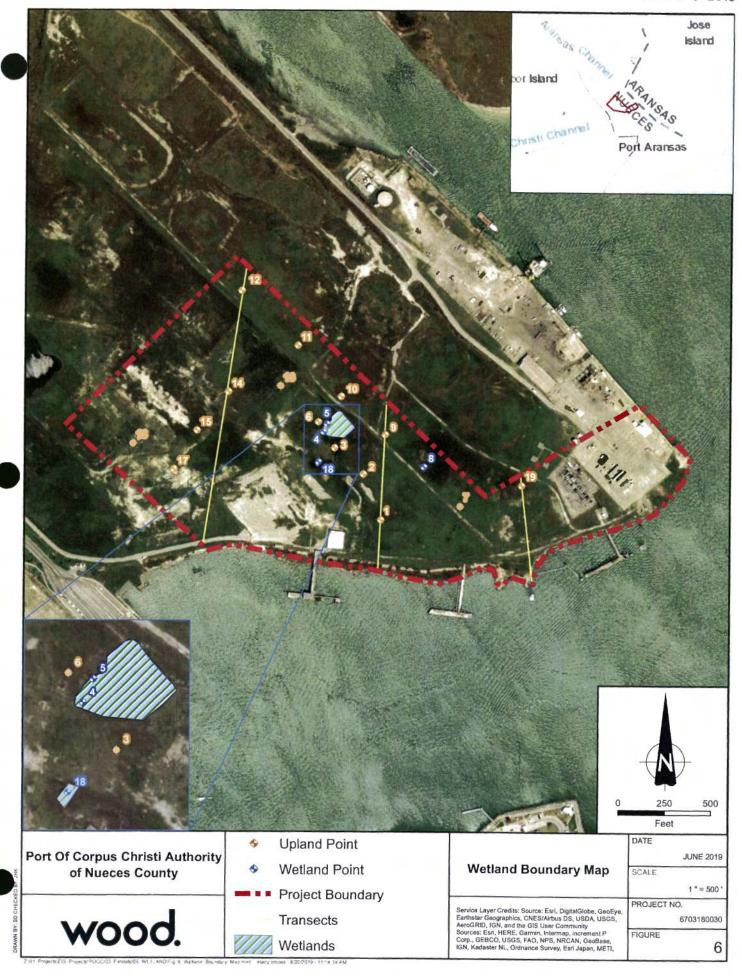
Not to Scale

PROJECT NO.

6703180030

FIGURE

5



PORT OF CORPUS CHRISTI

APPENDIX A Photographs





**PHOTO 1:** 

Sample Point 1: 27.84579415 -97.0659235

Photograph facing northeast.



#### PHOTO 2:

Sample Point 1: 27.845776 -97.065925

Photograph facing west.



Sample Point 1: 27.845776 -97.065926

Photograph facing northwest.





#### PHOTO 4:

Sample Point 2: 27.846435 -97.066169

Photograph facing northeast.

# JUL 1 0 2019 VOOd.



PHOTO 5:

Sample Point 2: 27.846451 -97.066192

Photograph facing west.



#### РНОТО 6:

Sample Point 2: 27.846453 -97.066195

Photograph facing north.

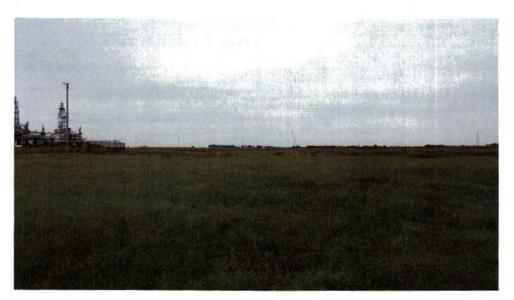




Sample Point 3: 27.846886 -97.06671

Photograph facing north.



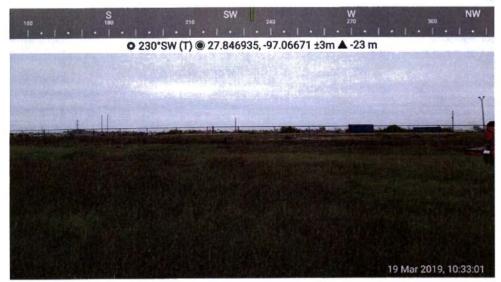


#### **PHOTO 8:**

Sample Point 3: 27.846907 -97.066721

Photograph facing west.

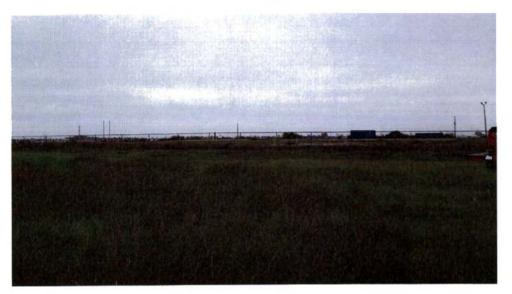
WOOD.



**PHOTO 9:** 

Sample Point 3: 27.846935 -97.06671

Photograph facing southwest.



**PHOTO 10:** 

Sample Point 3: 27.846935 -97.06671

Photograph facing southwest.





**PHOTO 11:** 

Sample Point 4: 27.84712500 -97.066769

Photograph facing southwest.



#### **PHOTO 12:**

Sample Point 5: 27.847217 -97.066811

Photograph facing east.





**PHOTO 13:** 

Sample Point 5: 27.847217 -97.066811

Photograph facing west.



#### **PHOTO 14:**

Sample Point 6: 27.847266 -97.066943

Photograph facing north.





PHOTO 15:

Sample Point 6: 27.847266 -97.066943

Photograph facing east.



#### **PHOTO 16:**

Sample Point 6: 27.847265 -97.066944

Photograph facing west.





Sample Point 7: 27.846009 -97.064602

Photograph facing north.





#### **PHOTO 18:**

Sample Point 7: 27.846009 -97.064602

Photograph facing east.





Sample Point 7: 27.846011 -97.064602

Photograph facing west.



PHOTO 20:

Sample Point 8: 27.846588 -97.065192

Photograph facing north.





**PHOTO 21:** 

Sample Point 8: 27.846577 -97.065209

Photograph facing east.



#### **PHOTO 22:**

Sample Point 8: 27.846577 -97.065209

Photograph facing west.

Wood.



Sample Point 10: 27.847646 -97.066556

Photograph facing north.



#### **PHOTO 24:**

Sample Point 10: 27.847646 -97.066556

Photograph facing west.

JUL 1 0 2019 WOOD.



**PHOTO 25:** 

Sample Point 11: 27.84842 -97.067287

Photograph facing northwest.



**PHOTO 26:** 

Sample Point 11: 27.84842 -97.067287

Photograph facing north.



PHOTO 27:

Sample Point 11: 27.848425 -97.067282

Photograph facing east.



**PHOTO 28:** 

Sample Point 12: 27.849249 -97.06821

Photograph facing southeast.





**PHOTO 29:** 

Sample Point 12: 27.849249 -97.06821

Photograph facing north.



**PHOTO 30:** 

Sample Point 12: 27.84925 -97.068208

Photograph facing west.





**PHOTO 31:** 

Sample Point 13: 27.847859 -97.067555

Photograph facing west.



#### **PHOTO 32:**

Sample Point 13: 27.847859 -97.067555

Photograph facing north.

WOOD.

**PHOTO 33:** 

Sample Point 13: 27.847853 -97.067554

Photograph facing east.



**PHOTO 34:** 

Sample Point 14: 27.847744 -97.068421

Photograph facing north.





**PHOTO 35:** 

Sample Point 14: 27.847729 -97.068426

Photograph facing northwest.



#### **PHOTO 36:**

Sample Point 14: 27.847729 -97.068426

Photograph facing west.

JUL 1 0 2019 WOOD.



**PHOTO 37:** 

Sample Point 15: 27.847337 -97.069051

Photograph facing north.



**PHOTO 38:** 

Sample Point 15: 27.847337 -97.069051

Photograph facing west.

**PHOTO 39:** 

Sample Point 15: 27.847336 -97.069089

Photograph facing south.



**PHOTO 40:** 

Sample Point 16: 27.847007 -97.070052

Photograph facing north.

JUL 1 0 2019.



**PHOTO 41:** 

Sample Point 16: 27.847007 -97.070052

Photograph facing east.



#### **PHOTO 42:**

Sample Point 16: 27.847001 -97.070055

Photograph facing west.





Sample Point 17: 27.846541 -97.069355

Photograph facing west.



**PHOTO 44:** 

Sample Point 17: 27.846541 -97.069355

Photograph facing south.



**PHOTO 45:** 

Sample Point 17: 27.846541 -97.069355

Photograph facing north.



**PHOTO 46:** 

Sample Point 18: 27.846535 -97.067032

Photograph facing northwest.

wood.



**PHOTO 47:** 

Sample Point 18: 27.846535 -97.067032

Photograph facing northeast.



**PHOTO 48:** 

Sample Point 18: 27.846535 -97.067032

Photograph facing west.

# APPENDIX B Wetland Delineation Datasheets

Project/Site: Harbor Island	City	/County: Nuece C	County	Sampling Da	te: March	19, 2019
Applicant/Owner: POCCA		80	State: TX			1
Investigator(s): Ashley Bogrand, Orlando Recio	Sect	ion, Township, Ra				
Landform (hillslope, terrace, etc.): Prairie	Loca	al relief (concave,	convex, none):	None :	Slope (%): 0	
	at: 27.8457941		Long: -97.0		Datum: NAD8	3
Soil Map Unit Name: Mustang Fine Sand, 0 to 1 percent	1			NWI classification:		
Are climatic / hydrologic conditions on the site typical for the		ar? Yes 2	X No	<ul> <li>(If no, explain in Re</li> </ul>		
Are vegetation, Soil, or Hydrology		D.		보다장 - 하다. 하는 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그		No
Are vegetation , Soil , or Hydrology		THE THE PARTY OF T			The state of the s	
SUMMARY OF FINDINGS – Attach site map s		- 50				etc.
Hydrophytic Vegetation Present? Yes	NoX	Is the Sampled	Area within a			
Hydric Soil Present? Yes X	No ol	Wetland?	Alea Willin a	Yes N	o X	
Wetland Hydrology Present? Yes	No X			***		
Remarks:				MIDDE SERVE		
HYDROLOGY						
Wetland Hydrology Indicators:			Se	condary Indicators (m	inimum of two	required)
Primary Indicators (minimum of one is required; check all	that apply)		11	Surface Soil Cracks		
	Aquatic Fauna (E	313)		Sparsely Vegetated		ace (B8)
	Marl Deposits (B			Drainage Patterns (		(/
( — · · · · · · · · · · · · · · · · · ·	- Hydrogen Sulfide		×2	Moss Trim Lines (B	\$180484 <b>\$</b>	
		heres on Living R	Roots (C3)	Dry-Season Water		
<del>-                                   </del>	Presence of Red			Crayfish Burrows (C		
The second section of the second section of the second second second section s	Recent Iron Redu	uction in Tilled Soi	ils (C6)	Saturation Visible of	-cu*	v (C9)
	Thin Muck Surface	ce (C7)		Geomorphic Positio		. (/
Iron Deposits (B5)	Other (Explain in	Remarks)	® <del></del>	Shallow Aquitard (D	03)	
Inundation Visible on Aerial Imagery (B7)			1.0	FAC-Neutral Test (I	05)	
Water-Stained Leaves (B9)				Sphagnum moss (D	08) (LRR T, U)	
Field Observations:				The second secon		
Surface water present? Yes No X	Depth (inches):					
Water table present? Yes No _X	Depth (inches):					
Saturation present? Yes No _X	Depth (inches):		Wetland Hydro	logy Present? Ye	es_ No	X
(includes capillary fringe)	a sidal abatan a					
Describe Recorded Data (stream gauge, monitoring well,	aeriai priotos, p	revious inspection	is), ir available:			
Remarks:	-					
Remarks.						

# VEGETATION (Four Strata) - Use scientific names of plants

	names of pla	ints		Sampling Point: 1
The second secon	Absolute	Dominant	Indicator	Dominance Test worksheet:
ree Stratum (Plot Size: 30')	% Cover	Species?	Status	Number of Dominant Species
1 None				That Are OBL, FACW, or FAC: 0 (A
2				Total Number of Dominant
3				Species Across all Strata: 3 (E
4				Percent of Dominant Species that
5		·		are OBL, FACW, or FAC: 0.00% (A
6				
7				Prevalence Index worksheet
8				Total % Cover of: Multiply by:
	0	= Total Cove	r	OBL species 0 x 1 = 0
50% of total cover: 0	20%	of total cover:	0	FACW species 0 x 2 = 0
apliing/Shrub Stratum (Plot Size: 30'	)	4		FAC species 0 x 3 = 0
1 None				FACU species 110 x 4 = 440
2				UPL species 27 x 5 = 135
3				Column totals 137 (A) 575 (E
				A STATE OF THE STA
		() <del></del> )()		Prevalence Index = B/A = 4.20
				Hydrophytic Vegetation Indicators:
				1 -Rapid Test for Hydrophytic Vegetation
3				2 - Dominance Test is >50%
·		= Total Cove		3 - Prevalence Index is ≤3.0 <sup>1</sup>
500/-64-4-1	0			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
50% of total cover: 0		of total cover:	0	Problematic Hydrophytic Vegetation (Explain)
erb Stratum (Plot Size: 30' )				1,
Cynodon dactylon	65	<u> </u>	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2 Houstonia pusilla		Y	FACU	Definitions of Four Vegetation Strata:
Coreopsis basalis		Y	UPL	Tree - Woody plants, excluding vines 3 in. (7.6 cm) or
Sorghum halepense		<u>N</u>	FACU	more in diameter at breast height (DBH), regardless of
Medicago polymorpha	10	N	FACU	height.
Oenothera grandis	5	N	UPL	S. B. J. L. W. B. Miller of the state of the
Lepidium virginicum	2	N	UPL	Sapling/shrub - Woody plants, excluding vines, less the 3 in. DBH and greater than 3.28 ft (1 m) tall.
3				· · · · · · · · · · · · · · · · · · ·
				Herb - All herbaceous (non-woody) plants, regardless
0				size, and woody plants less than 3.28 ft tall.
1				Woody vines - All woody vines greater than 3.28 ft in
2				height.
	137	= Total Cove	r	
50% of total cover: 68.5		of total cover:		
/oody Vine Stratum (Plot Size: 30')				1
None				
				1
<sup>′</sup>				1
3				1
				.
4				1
				Hydrophytic
4		= Total Cover		Hydrophytic vegetation present? Yes No X

Sampling Point:	1	
		_

	scription:		scribe atrix	to the de	pth neede			ent the		or or confi	rm the al	sence of indicate	ors.)
Depth (inches)	Color			%	Color	(moist		%	Type <sup>1</sup>	Loc2		Texture	Remarks
0-9	10YR	_	/ 3	98	7.5YR	5	8	2	C	PL		y Sand	Nomano
9-12	10YR		/ 1	85	7.5YR	4 /		15	c	PL		Loam	
			/ 1	85	5YR	4 /		15		PL	Sandy		THE SECOND STATES
12-15	10YR	-4	<u>/                                    </u>		31K	4 /		10			Sandy	Ciay	
+													
													CONT.
<del></del>													
<sup>1</sup> Type: C=Co	ncentration	n, D=	Depleti	ion, RM=F	Reduced N	Matrix,	CS=C	overed	or Coate	d Sand Gr	ains.	<sup>2</sup> Location: PL=Por	e Lining, M=Matrix.
Hydric So	I Indicator	rs: (	Applica	able to al	LRRs, u	nless	other	vise no	oted.)			Indicators for Pr	oblematic Hydric Soils <sup>3</sup> :
Histisol										8) (LRR S	TII	1 cm Muck (A	9) (I RR (I)
_		(2)			_	-			,	R, S, T, U)		2 cm Muck (A	
<u> </u>	pipedon (A	12)			_						,	_	
I —	listic (A3)				_		-	-	eral (F1) (	LKK O)		_	ic (F18) (outside MLRA 150A,B)
	en Sulfide				-				trix (F2)			_	odplain Soils (F19) (LRR P, S, T)
ı —	d Layers (	-			<u>X</u>			atrix (F					right Loamy Soils (F20)
I — °	Bodies (A	, ,	-		_				ce (F6)			(MLRA 153B	•
5 cm M	ucky Mine	ral (A	7) <b>(LR</b> I	R P, T, U)	_				rface (F7)			Red Parent M	
_	resence (A		,		_	Redo	x Dep	ression	ıs (F8)			Very Shallow	Dark Surface (TF12)
1 cm M	uck (A9) (L	.RR	P, T)		_	Marl	(F10) (	(LRR U	F)			Other (Explain	n in Remarks)
Deplete	ed Below D	ark S	Suface	(A11)	_	Deple	eted O	chric (F	-11) <b>(ML</b> F	RA 151)			
Thick D	ark Surfac	e (A1	12)		_	Iron-I	Manga	nese N	lasses (F	12) <b>(LRR</b>	0, P, T)	<sup>3</sup> Indicators of	hydrophytic vegetation and
Coast F	rairie Red	ox (A	16) <b>(M</b>	LRA 150	A)	Umbi	ric Sur	face (F	13) (LRR	P, T, U)			logy must be present,
Sandy	Mucky Min	eral (	S1) (LF	RR O, S)		Delta	Ochri	c (F17)	(MLRA 1	51)		unless disturb	ed or problematic.
	Gleyed Ma				_	Redu	iced V	ertic (F	18) (MLR	A 150A, 1	50B)		
_	Redox (S5)	-	,		_				, ,	F19) <b>(MLF</b>			
_	d Matrix (S				_							19A, 153C, 153D)	
	urface (S7)		RPS	T 11)	_	7 11 1011	12,000			(,	(	,,	
Restrictive			100,000	_100 5									
Type:	N/A	ODSE	aveu).										
Depth (i		N/A	-10							Hydric s	oil prese	nt? Yes	X No
				7.5						110.00		december of the second	
Remarks:													
1													

Project/Site: Harbor Island		City/C	ounty: Nuece Count	y	Sampling Date:	March 19, 2019
Applicant/Owner: POCCA				State: TX	Sampling Point:	2
Investigator(s): Ashley Bogran	d, Orlando Recio	Section	n, Township, Range:	None		
Landform (hillslope, terrace, etc.):		Local	relief (concave, conv	ex, none): Nor	ne Slope	e (%): <b>0</b>
Subregion (LRR or MLRA): LRR 1	and the second s	7.84675000	L	ong: -97.0662	and the second second	ım: NAD83
Soil Map Unit Name: Mustang F				- C C C C C C C C.	IWI classification:	STORE
Are climatic / hydrologic conditions		e of the year	? Yes X			
	, or Hydrologysign					
Are vegetation , Soil	, or Hydrologynatu	rally problem	atic? (If nee	ded, explain a	ny answers in Remarks	i.)
SUMMARY OF FINDINGS						
Hydrophytic Vegetation Present	? Yes No _	<u>x</u>	s the Sampled Area	within a		
Hydric Soil Present?	Yes X No		Vetland?		Yes No	X
Wetland Hydrology Present?	Yes No _	X				
Remarks:						
LIVEROL COV						
HYDROLOGY						
Wetland Hydrology Indicators				1	dary Indicators (minimu	
Primary Indicators (minimum of					urface Soil Cracks (B6)	
— Surface Water (A1)		ic Fauna (B1	30 <del>1</del> .1		parsely Vegetated Con	
High Water Table (A2)		Deposits (B15			rainage Patterns (B10)	
— Saturation (A3)		gen Sulfide (		42000 No. 10000	oss Trim Lines (B16)	0207
— Water Marks (B1)			eres on Living Roots		ry-Season Water Table	(C2)
<ul> <li>Sediment Deposits (B2)</li> </ul>		nce of Reduc	A CONTRACTOR OF THE PARTY OF		rayfish Burrows (C8)	
Drift Deposits (B3)			tion in Tilled Soils (Co		aturation Visible on Aer	
<ul> <li>Algal Mat or Crust (B4)</li> </ul>		Muck Surface			eomorphic Position (D2	2)
— Iron Deposits (B5)		(Explain in R	emarks)		nallow Aquitard (D3)	
<ul> <li>Inundation Visible on Aerial</li> </ul>	2014/03/2015/05/05/05/05/05/05/04/04/05/05/05/05/05/05/05/05/05/05/05/05/05/			11	AC-Neutral Test (D5)	
Water-Stained Leaves (B9)				S	ohagnum moss (D8) (L	RR T, U)
Field Observations:						
Surface water present?	Yes No_X Dep	- Contraction -				
Water table present?	Yes No_X Dep					
Saturation present?	Yes No X Dep	th (inches): _	Wetla	and Hydrology	Present? Yes_	NoX
(includes capillary fringe)  Describe Recorded Data (stream	n gauge monitoring well aeria	al photos, pre	vious inspections), if	available:		
Describe Nesorided Data (Stream	gaago, momoning nen, asin	Prioresi Pro	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
Remarks:		a state of the				
1						

VEGETATION (	(Four Strata)	- Use	scientific	names	of plants
A - O - 1 / 1 / O / /	I our outur	- 030	SCICITUIL	Hailies	UI piants

ETATION (Four Strata) - Use scientific na	inco oi pia			Sampling Point: 2	
ree Stratum (Plot Size: 30' )	Absolute	Dominant	Indicator	Dominance Test worksheet:	
	% Cover	Species?	Status	Number of Dominant Species	
1 None				That Are OBL, FACW, or FAC:	(A)
2				Total Number of Dominant	
3				Species Across all Strata: 2	(B)
4				Percent of Dominant Species that	
5				are OBL, FACW, or FAC: 0.00%	(A/
6					
7				Prevalence Index worksheet	
3				Total % Cover of: Multiply by:	
	0	= Total Cover		OBL species 0 x 1 = 0	
50% of total cover: 0	20%	of total cover:	0	FACW species 0 x 2 = 0	
apliing/Shrub Stratum (Plot Size: 30')				FAC species0 x 3 =0	
None				FACU species95 x 4 =380	
2				UPL species 45 x 5 = 225	
3				Column totals 140 (A) 605	(B)
		78			
	-01-200-00-00-00-00-00-00-00-00-00-00-00-00			Prevalence Index = B/A = 4.32	
				Hydrophytic Vegetation Indicators:	
				1 -Rapid Test for Hydrophytic Vegetation	
		170		2 - Dominance Test is >50%	
	0	= Total Cover		3 - Prevalence Index is ≤3.01	
				3 - Prevalence Index is ≤3.0 <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
50% of total cover: 0		= Total Cover of total cover:		3 - Prevalence Index is ≤3.0¹Problematic Hydrophytic Vegetation¹ (Explain)	
50% of total cover: 0 erb Stratum (Plot Size: 30' )	20%	of total cover:	0	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	he
50% of total cover: 0 erb Stratum (Plot Size: 30' )  Cynodon dactylon	20%	of total cover:	0 FACU		be
50% of total cover: 0 erb Stratum (Plot Size: 30' ) Cynodon dactylon Coreopsis basalis	80 40	of total cover:	FACU UPL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must	be
50% of total cover: 0  erb Stratum (Plot Size: 30' )  Cynodon dactylon  Coreopsis basalis  Sonchus asper	80 40 10	of total cover:	FACU UPL FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must present, unless disturbed or problematic.  Definitions of Four Vegetation Strata:	
50% of total cover: 0  erb Stratum (Plot Size: 30' )  Cynodon dactylon  Coreopsis basalis  Sonchus asper  Thymophylla tenuiloba	80 40 10 5	Y Y N	FACU UPL FACU UPL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must present, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless	r
50% of total cover: 0  erb Stratum (Plot Size: 30' )  Cynodon dactylon  Coreopsis basalis  Sonchus asper  Thymophylla tenuiloba  Vicia sativa	80 40 10 5	of total cover:	FACU UPL FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must present, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm) of	r
50% of total cover: 0  erb Stratum (Plot Size: 30' )  Cynodon dactylon  Coreopsis basalis  Sonchus asper  Thymophylla tenuiloba  Vicia sativa	80 40 10 5 5	Y Y N	FACU UPL FACU UPL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must present, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless height.	or of
50% of total cover: 0  erb Stratum (Plot Size: 30' )  Cynodon dactylon  Coreopsis basalis  Sonchus asper  Thymophylla tenuiloba  Vicia sativa	80 40 10 5	Y Y N N N	FACU UPL FACU UPL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must present, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless	or of
50% of total cover: 0 erb Stratum (Plot Size: 30' )  Cynodon dactylon  Coreopsis basalis  Sonchus asper  Thymophylla tenuiloba  Vicia sativa	80 40 10 5	Y Y N N N	FACU UPL FACU UPL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must present, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless height.  Sapling/shrub - Woody plants, excluding vines, less 3 in. DBH and greater than 3.28 ft (1 m) tall.	or of tha
50% of total cover: 0 erb Stratum (Plot Size: 30' ) Cynodon dactylon Coreopsis basalis Sonchus asper Thymophylla tenuiloba Vicia sativa	80 40 10 5	Y Y N N N	FACU UPL FACU UPL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must present, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless height.  Sapling/shrub - Woody plants, excluding vines, less 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regardless	or of tha
50% of total cover: 0  erb Stratum (Plot Size: 30' )  Cynodon dactylon  Coreopsis basalis  Sonchus asper  Thymophylla tenuiloba  Vicia sativa	80 40 10 5 5	Y Y N N N	FACU UPL FACU UPL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must present, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless height.  Sapling/shrub - Woody plants, excluding vines, less 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regardles size, and woody plants less than 3.28 ft tall.	of the
50% of total cover: 0 erb Stratum (Plot Size: 30' )  Cynodon dactylon  Coreopsis basalis  Sonchus asper  Thymophylla tenuiloba  Vicia sativa	80 40 10 5 5	Y Y N N N	FACU UPL FACU UPL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must present, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless height.  Sapling/shrub - Woody plants, excluding vines, less 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regardles size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28 ft in	of the
50% of total cover: 0  erb Stratum (Plot Size: 30' )  Cynodon dactylon  Coreopsis basalis  Sonchus asper  Thymophylla tenuiloba  Vicia sativa	80 40 10 5 5	Y Y N N N	FACU UPL FACU UPL FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must present, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless height.  Sapling/shrub - Woody plants, excluding vines, less 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regardles size, and woody plants less than 3.28 ft tall.	of the
50% of total cover: 0  erb Stratum (Plot Size: 30' )  Cynodon dactylon  Coreopsis basalis  Sonchus asper  Thymophylla tenuiloba  Vicia sativa	80 40 10 5 5	Y Y N N N	FACU UPL FACU UPL FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must present, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless height.  Sapling/shrub - Woody plants, excluding vines, less 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regardles size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28 ft in	of the
50% of total cover: 0  erb Stratum (Plot Size: 30' )  Cynodon dactylon  Coreopsis basalis  Sonchus asper  Thymophylla tenuiloba  Vicia sativa	80 40 10 5 5	Y Y N N N	FACU UPL FACU UPL FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must present, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless height.  Sapling/shrub - Woody plants, excluding vines, less 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regardles size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28 ft in	er of tha
50% of total cover: 0  erb Stratum (Plot Size: 30' )  Cynodon dactylon  Coreopsis basalis  Sonchus asper  Thymophylla tenuiloba  Vicia sativa  50% of total cover: 70	80 40 10 5 5	Y Y N N N T T T T T T T T T T T T T T T	FACU UPL FACU UPL FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must present, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless height.  Sapling/shrub - Woody plants, excluding vines, less 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regardles size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28 ft in	er of tha
50% of total cover: 0  erb Stratum (Plot Size: 30' )  Cynodon dactylon  Coreopsis basalis  Sonchus asper  Thymophylla tenuiloba  Vicia sativa  50% of total cover: 70  coody Vine Stratum (Plot Size: 30' )	80 40 10 5 5	Y Y N N N T T T T T T T T T T T T T T T	FACU UPL FACU UPL FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must present, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless height.  Sapling/shrub - Woody plants, excluding vines, less 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regardles size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28 ft in	of the
50% of total cover: 0  erb Stratum (Plot Size: 30' )  Cynodon dactylon  Coreopsis basalis  Sonchus asper  Thymophylla tenuiloba  Vicia sativa  50% of total cover: 70  coody Vine Stratum (Plot Size: 30' )  None	80 40 10 5 5	Y Y N N N T T T T T T T T T T T T T T T	FACU UPL FACU UPL FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must present, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless height.  Sapling/shrub - Woody plants, excluding vines, less 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regardles size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28 ft in	of the
50% of total cover: 0  erb Stratum (Plot Size: 30' )  Cynodon dactylon  Coreopsis basalis  Sonchus asper  Thymophylla tenuiloba  Vicia sativa  50% of total cover: 70  coody Vine Stratum (Plot Size: 30' )  None	20% d 80 40 10 5 5	Y Y N N N T T T T T T T T T T T T T T T	FACU UPL FACU UPL FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must present, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless height.  Sapling/shrub - Woody plants, excluding vines, less 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regardles size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28 ft in	of the
50% of total cover: 0  erb Stratum (Plot Size: 30' )  Cynodon dactylon  Coreopsis basalis  Sonchus asper  Thymophylla tenuiloba  Vicia sativa  50% of total cover: 70  None	20% d 80 40 10 5 5	Y Y N N N T T Total Cover:	FACU UPL FACU UPL FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must present, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless height.  Sapling/shrub - Woody plants, excluding vines, less 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regardles size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28 ft in	of the
50% of total cover: 0  erb Stratum (Plot Size: 30' )  Cynodon dactylon  Coreopsis basalis  Sonchus asper  Thymophylla tenuiloba  Vicia sativa  50  10  11  20  50% of total cover: 70  None	20% d 80 40 10 5 5	Y Y N N N T T Total Cover:	FACU UPL FACU UPL FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must 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 height.  Sapling/shrub - Woody plants, excluding vines, less 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regardles size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28 ft in height.	of the
50% of total cover: 0 erb Stratum (Plot Size: 30' ) Cynodon dactylon Coreopsis basalis Sonchus asper Thymophylla tenuiloba Vicia sativa  50 1	20% d 80 40 10 5 5 140 20% d	Y Y N N N T Total Cover:	FACU UPL FACU FACU 28	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must 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 height.  Sapling/shrub - Woody plants, excluding vines, less 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regardles size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28 ft in height.	of the
50% of total cover: 0  erb Stratum (Plot Size: 30' )  Cynodon dactylon  Coreopsis basalis  Sonchus asper  Thymophylla tenuiloba  Vicia sativa  50  10  11  20  50% of total cover: 70  None	20% d 80 40 10 5 5 5	Y Y N N N T T Total Cover:	FACU UPL FACU FACU 28	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must 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 height.  Sapling/shrub - Woody plants, excluding vines, less 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regardles size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28 ft in height.	er of tha

Sampling Point:	2	

Profile De Depth	scription:	(Describe t Matrix	to the dep	th neede		nent the x Featur		r or confi	rm the ab	sence of indicat	tors.)	
(inches)	Color	(moist)	%	Color	(moist)	%	Type <sup>1</sup>	Loc2		Гexture		Remarks
0-8	10YR	5 / 2	93	5YR	5 / 8	7	С	PL	Sandy			
8-14	10YR	4/2	90	7.5YR	5 / 6	10	С	PL	Sandy			
					inter-plants							
	B									-		
					-10111-000							
-						-						
¹Type: C=Co	ncentration.	D=Depletion	on, RM=R	educed N	Matrix, CS=C	Covered	or Coated	Sand Gr	ains. 2	Location: PL=Po	re Lining.	M=Matrix.
	il Indicators	7.5	West 14 No.	ery and a second	V20 70 10 10 10 10 10 10 10 10 10 10 10 10 10	100	ST 25500			55 (Ou 1510)" HIL 50.		tic Hydric Soils <sup>3</sup> :
Histisol	(A1)				Polyvalue	Below S	urface (S	8) (I RR S	T II)	1 cm Muck (A	49\ /I RR	0)
I —	pipedon (A	2)		_	Thin Dark					2 cm Muck (/		*
I —	fistic (A3)	۷)		_	Loamy Mu					_		•
i —		A 4\						LKK O)				(outside MLRA 150A,B)
	en Sulfide (			_	Loamy Gle	-						Soils (F19) (LRR P, S, T)
	d Layers (A	,	T	<u>X</u>	Depleted N	-				_		my Soils (F20)
	Bodies (A6			_	Redox Dar					(MLRA 153E	•	r=a\
I —	lucky Minera		R P, T, U)		Depleted D					Red Parent N		•
ı —	resence (A8				Redox Dep					Very Shallow		, ,
	uck (A9) (LI				Marl (F10)	,				Other (Explai	n in Rem	arks)
_ Deplete	ed Below Da	rk Suface (	(A11)		Depleted C	•						
1 —	ark Surface			_	Iron-Manga				O, P, T)	3Indicators of	hydrophy	ytic vegetation and
X Coast F	Prairie Redo	x (A16) <b>(M</b> l	LRA 150A		Umbric Su	rface (F	13) <b>(LRR</b>	P, T, U)				st be present,
Sandy	Mucky Mine	ral (S1) <b>(LF</b>	RR O, S)	_	Delta Ochr	ic (F17)	(MLRA 1	51)		unless disturl	oed or pro	oblematic.
Sandy	Gleyed Matr	rix (S4)		_	Reduced V	/ertic (F	18) <b>(MLR</b>	A 150A, 1	50B)			
	Redox (S5)			_	Piedmont I	Floodpla	in Soils (f	F19) <b>(MLR</b>	A 149A)			
Strippe	d Matrix (S6	i)			Anomalous	s Bright	Loamy So	oils (F20) (	MLRA 14	9A, 153C, 153D)		
_ Dark Si	urface (S7) (	LRR P, S,	T, U)									
Restrictive	Layer (if o	bserved):										
Type:	N/A					-					52/2	1991
Depth (ii	nches): N	/A				-		Hydric s	oil preser	nt? Yes	X	No
Remarks:		***							100000000000000000000000000000000000000			
						-					-	

Project/Site: Harbor Island		Cit	y/County: Nuece	County	Samplin	g Date:	March 19, 2019
Applicant/Owner: POCCA				State: TX		g Point:	3
Investigator(s): Ashley Bogra	nd, Orlando Recio	Sec	ction, Township, F	Range: None			
Landform (hillslope, terrace, etc.	): Prairie	Loc	cal relief (concave	e, convex, none):	None	Slope (	(%): 0
Subregion (LRR or MLRA): LRR	Т	Lat: 27.846901	00	Long: -97.0	66684	Datun	n: NAD83
Soil Map Unit Name: Mustang	Fine Sand, 0 to 1 perce	ent			NWI classifica		
Are climatic / hydrologic conditio			ear? Yes				
Are vegetation, Soil			-				7/(
	, or Hydrology						
SUMMARY OF FINDINGS							
Hydrophytic Vegetation Preser	it? Yes X	No	Is the Sample	d Area within a			
Hydric Soil Present?	Yes X	No	Wetland?	a rica within a	Yes	No	X
Wetland Hydrology Present?	Yes	No X	2.		<del></del>	_	
Remarks:							
HYDROLOGY			(a		1700		
Wetland Hydrology Indicator	s:			Se	condary Indicato	rs (minimur	n of two required)
Primary Indicators (minimum o		all that apply)			Surface Soil C	11 12	
Surface Water (A1)		Aquatic Fauna (	(B13)			54-10-00-00-00-1-00-0	ave Surface (B8)
High Water Table (A2)	_	Marl Deposits (I	B15) (LRR U)	20	Drainage Patte		
Saturation (A3)		Hydrogen Sulfid	le Odor (C1)	A <del></del>	Moss Trim Line	es (B16)	
Water Marks (B1)	_	Oxidized Rhizos	spheres on Living	Roots (C3)	Dry-Season W	ater Table (	C2)
Sediment Deposits (B2)	_	Presence of Re			Crayfish Burro		
Drift Deposits (B3)	<del>-</del>	Recent Iron Rec	duction in Tilled S	oils (C6)	9		I Imagery (C9)
Algal Mat or Crust (B4)		Thin Muck Surfa	ace (C7)	- <del>5</del>	Geomorphic P		
Iron Deposits (B5)	_	Other (Explain i	n Remarks)	S.	Shallow Aquita	100 Die	
Inundation Visible on Aeria	al Imagery (B7)		326		FAC-Neutral T	est (D5)	
Water-Stained Leaves (B9	3)			-	Sphagnum mo		R T, U)
Field Observations:		-					
Surface water present?	Yes No_X	Depth (inches	):				
Water table present?	Yes No X						
Saturation present?		Depth (inches		Wetland Hydro	logy Present?	Yes	No X
(includes capillary fringe)	W 20 W WORK	TW	2/				
Describe Recorded Data (strea	m gauge, monitoring we	ell, aerial photos,	previous inspection	ons), if available:			
Remarks:							

١	/EGETATION	(Four Strata) -	Ilea	scientific	namee	of	nlant	6
¥	CGETATION	(rour Strata) -	USE	Scientific	names	OI	piant	S

50% of total cover:

50% of total cover: 0

50% of total cover: 60

(Plot Size: 30')

50% of total cover:

Sapliing/Shrub Stratum (Plot Size: 30')

Herb Stratum (Plot Size: 30')

3 Nothoscordum bivalve

1 Panicum repens 2 Eleocharis tuberculosa

Woody Vine Stratum 1 None

Tree Stratum (Plot Size: 30')

1 None

1 None

0 20% of total cover: 0

Hydrophytic

vegetation

present?

\_\_\_\_10\_\_\_\_

es of pla	nts		Sampling Point:	3				
Absolute	Dominant	Indicator	Dominance Test worksheet:					
% Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: 2					
			That Are OBL, FACW, or FAC: 2	(A)				
			Total Number of Dominant Species Across all Strata: 2	(B)				
				(6)				
			Percent of Dominant Species that are OBL, FACW, or FAC: 100.0	00% (A/B				
			Prevalence Index worksheet					
			Total % Cover of: Multiply by					
0	= Total Cove	-	OBL species 40 x1 =4	0				
20%	of total cover:	0	FACW species x 2 =14	40				
			FAC species 0 x 3 = 0	0				
			FACU species10 x 4 =4	0				
			UPL species 0 x 5 = (	0				
			Column totals 120 (A) 23	20 (B)				
			Prevalence Index = B/A =	1.83				
			Hydrophytic Vegetation Indicators:	1.03				
			1 -Rapid Test for Hydrophytic Vegetation	n				
- 10			X 2 - Dominance Test is >50%	Α.				
0	= Total Cover		X 3 - Prevalence Index is ≤3.0 <sup>1</sup>					
	of total cover:		Problematic Hydrophytic Vegetation <sup>1</sup> (Ex	xplain)				
	3.5		_					
70	Υ	FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrolo	gy must be				
40	Y	OBL	present, unless disturbed or problematic.					
10	N	FACU	Definitions of Four Vegetation Strata:	V97/2017-071-07-2019-0-111				
			Tree - Woody plants, excluding vines 3 in. (7 more in diameter at breast height (DBH), reg height.	00000 (70)				
			Sapling/shrub - Woody plants, excluding vir 3 in. DBH and greater than 3.28 ft (1 m) tall.	nes, less than				
			Herb - All herbaceous (non-woody) plants, re size, and woody plants less than 3.28 ft tall.	egardless of				
			Woody vines - All woody vines greater than height.	3.28 ft in				
120	= Total Cover							
2094	of total cover:	24						

Remarks:	(If	observed,	list	mor	pholo	gical	adap	tations	below	).

Yes X No\_

Color (moist)         %         Color (moist)         %         Type¹         Loc2         Texture         Remarks           0-4         10YR         3 / 2         100         Sandy Clay Loam           4-9         2.5YR         7 / 1         95         5YR         5 / 8         5         C         PL         Sandy Loam           9-12         10YR         3 / 1         95         7.5YR         4 / 6         5         C         PL         Loamy Sand		scription:	(Describe	to the de	epth neede		ment the		r or confi	rm the absence of ind	icators.)
10YR   3 / 2   100   10   10   10   10   10   10	epth nches)	Color		%	Color				Loc2	Texture	Remarks
9-12 10YR 3 / 1 95 7.5YR 4 / 6 5 C PL Loamy Sand  12-16 10YR 6 / 2 98 10YR 7 / 8 2 C PL Loamy Sand  12-16 10YR 6 / 2 98 10YR 7 / 8 2 C PL Loamy Sand  12-16 10YR 6 / 2 98 10YR 7 / 8 2 C PL Loamy Sand  12-16 10YR 6 / 2 98 10YR 7 / 8 2 C PL Loamy Sand  12-16 10YR 6 / 2 98 10YR 7 / 8 2 C PL Loamy Sand  12-16 10YR 6 / 2 98 10YR 7 / 8 2 C PL Loamy Sand  12-16 10YR 6 / 2 98 10YR 7 / 8 2 C PL Loamy Sand  12-16 10YR 6 / 2 98 10YR 7 / 8 2 C PL Loamy Sand  12-16 10YR 6 / 2 98 10YR 7 / 8 2 C PL Loamy Sand  12-16 10YR 6 / 2 98 10YR 7 / 8 2 C PL Loamy Sand  13-16 10YR 6 / 2 98 10YR 7 / 8 2 C PL Loamy Sand  13-16 10YR 6 / 2 98 10YR 7 / 8 2 C PL Loamy Sand  14-16 10YR 6 / 2 98 10YR 7 / 8 2 C PL Loamy Sand  14-16 10YR 6 / 2 98 10YR 7 / 8 2 C PL Loamy Sand  15-16 10YR 6 / 2 98 10YR 7 / 8 2 C PL Loamy Sand  15-16 10YR 6 / 2 98 10YR 7 / 8 2 C PL Loamy Sand  16-16 10YR 6 / 2 98 10YR 7 / 8 2 C PL Loamy Sand  16-16 10YR 6 / 2 98 10YR 7 / 8 2 C PL Loamy Sand  16-16 10YR 6 / 2 98 10YR 8 1		110015070000	· · · · ·	100						Sandy Clay Loam	7),
te: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  **Reduced Matrix**, CS=Covered or Coated Sand Grains.  **Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histiscol (A1)  Histiscol (A1)  Polyvalue Below Surface (S9) (LRR S, T, U)  Histiscol (A2)  Histiscol (A3)  Loamy Mucky Mineral (F1) (LRR O)  Stratified Layers (A5)  Crganic Bodies (A6) (LRR P, T, U)  Muck Presence (A8) (LRR P, T, U)  Tom Muck (A9) (LRR P, T, U)  Redox Dark Surface (F7)  Loamy Mucky Mineral (A7) (LRR P, T, U)  Marl (F10) (LRR U)  Depleted Dark Surface (A12)  Coast Prairie Redox (A16) (MLRA 150A)  Sandy Mucky Mineral (S1) (LRR O, S)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Dark Surface (S7) (LRR P, S, T, U)  Delta Ochric (F17) (MLRA 150A)  Piedmont Floodplain Soils (F20) (MLRA 149A)  Anomalous Bright Loamy Soils (F20)  Other (Explain in Remarks)  **Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Sandy Gleyed Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Bedox Dark Surface (F19) (MLRA 149A)  Anomalous Bright Loamy Soils (F20) (MLRA 149A)  Anomalous Bright Loamy Soils (F20) (MLRA 149A)  Hydric soil present?  Yes X No	4-9	2.5YR	7 / 1	95	5YR	5 / 8	5	С	PL	Sandy Loam	
Decided Sand Grains.  **Location: PL=Pore Lining, M=Matrix.*  **Indicators: (Applicable to all LRRs, unless otherwise noted.)  Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histisol (A1)  Polyvalue Below Surface (S9) (LRR S, T, U)  Histisol (A2)  Thin Dark Surface (S9) (LRR S, T, U)  Black Histic (A3)  Loamy Mucky Mineral (F1) (LRR O)  Stratified Layers (A5)  Corganic Bodies (A6) (LRR P, T, U)  Depleted Dark Surface (F6)  Mucky Mineral (A7) (LRR P, T, U)  Depleted Dark Surface (F7)  Redox Depressions (F8)  Constrainie Redox (A6) (LRR P, T)  Depleted Below Dark Surface (A12)  Coast Prairie Redox (A16) (MLRA 150A)  Sandy Mucky Mineral (S1) (LRR O, S)  Sandy Redox (S5)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (LRR P, T, U)  Depleted Octric (F11) (MLRA 150A)  Port (MLRA 150A)  Port (MLRA 150A)  Port (MLRA 150A)  Piedmont Floodplain Soils (F19) (LRR P, T, U)  Port (Explain in Remarks)  Piedmont Floodplain Soils (F19) (LRR O, P, T)  Popleted Below Dark Surface (A12)  Coast Prairie Redox (A16) (MLRA 150A)  Sandy Mucky Mineral (S1) (LRR O, S)  Delta Ochric (F17) (MLRA 150A)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Anomalous Bright Loamy Soils (F20) (MLRA 149A)  Anomalous Bright Loamy Soils (F20) (MLRA 149A)  Anomalous Bright Loamy Soils (F20) (MLRA 149A)  Hydric soil present?  Yes X No	9-12	10YR	3 / 1	95	7.5YR	4 / 6	5	С	PL	Loamy Sand	
Adric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histisol (A1)	12-16	10YR	6 / 2	98	10YR	7 / 8	2	С	PL	Loamy Sand	
Adric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histisol (A1)										1000000	
Adric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histisol (A1)		34 - 416									
Histisol (A1)	pe: C=Co	ncentration	, D=Depleti	on, RM=	Reduced N	Matrix, CS	=Covered	or Coated	Sand Gr	ains. <sup>2</sup> Location: PL=	Pore Lining, M=Matrix.
Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Loamy Mucky Mineral (F1) (LRR O)  Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  Muck Presence (A8) (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 Mucky Mineral (S1) (LRR O, S)  Sandy Redox (S5)  Stripped Matrix (S6)  Dark Surface (S9) (LRR O, S)  Loamy Mucky Mineral (F1) (LRR O)  Reduced Vertic (F18) (outside MLRA 150A, B)  Reduced Vertic (F18) (outside MLRA 150B, Piedmont Floodplain Soils (F19) (LRR O, P, T)  Anomalous Bright Loamy Soils (F20) (MLRA 149A)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Reduced Vertic (F18) (outside MLRA 150A, Piedmont Floodplain Soils (F19) (MLRA 149A, 153C, 153D)  Reduced Vertic (F18) (MLRA 150A, Piedmont Floodplain Soils (F19) (MLRA 149A, 153C, 153D)  Reduced Vertic (F18) (MLRA 150A, Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D)  Reduced Vertic (F18) (MLRA 150A, Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D)  Reduced Vertic (F18) (MLRA 150A, Piedmont Floodplain Soils (F19) (MLRA 149A, 153C, 153D)  Reduced Vertic (F18) (MLRA 150A, Piedmont Floodplain Soils (F19) (MLRA 149A, 153C, 153D)	ydric Soi	Indicator	s: (Applica	able to a	II LRRs, u	nless oth	erwise no	oted.)		Indicators fo	or Problematic Hydric Soils <sup>3</sup> :
Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Loamy Mucky Mineral (F1) (LRR O)  Stratified Layers (A5)  Organic Bodies (A6) (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 Redox (S5)  Sandy Redox (S5)  Dark Surface (S9) (LRR O, S)  Thin Dark Surface (S9) (LRR O, S)  Loamy Mucky Mineral (F1) (LRR O)  Reduced Vertic (F18) (outside MLRA 150A, B)  Reduced Vertic (F19) (LRR O, S)  Reduced Vertic (F10) (LRR O, S)  Anomalous Bright Loamy Soils (F20)  (MLRA 153B)  Red Parent Material (TF2)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)  Other (Explain in Remarks)  Depleted Ochric (F11) (MLRA 151)  Iron-Manganese Masses (F12) (LRR O, P, T)  Wetland hydrology must be present, unless disturbed or problematic.  Sandy Mucky Mineral (S1) (LRR O, S)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Hydric soil present?  Yes X No	Histisol	(A1)				Polyvalu	e Below S	urface (S	8) (LRR S	, T, U) 1 cm Muc	ck (A9) (LRR O)
Black Histic (A3)	-	. ,	.2)		_	Thin Dar	k Surface	(S9) (LRF	R, S, T, U)		,
Hydrogen Sulfide (A4)  Loamy Gleyed Matrix (F2)  Stratified Layers (A5)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Mucky Mineral (A7) (LRR P, T, U)  Depleted Dark Surface (F7)  Redox Depressions (F8)  Marl (F10) (LRR U)  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)  Sandy Redox (S5)  Delta Ochric (F17) (MLRA 150A)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Destrictive Layer (if observed):  Type: N/A  Depth (inches): N/A  Depleted Matrix (F2)  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)  Other (Explain in Remarks)  Other (Explain in Remarks)  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Piedmont Floodplain Soils (F19) (MLRA 149A)  Hydric soil present?  Yes X No	-		,		_					_	
Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  From Mucky Mineral (A7) (LRR P, T, U)  Depleted Dark Surface (F6)  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)  Sandy Redox (S5)  Dark Surface (S7)  Redox Depressions (F8)  Marl (F10) (LRR U)  Depleted Dark Surface (F1)  Redox Depressions (F8)  Marl (F10) (LRR U)  Depleted Ochric (F11) (MLRA 151)  Iron-Manganese Masses (F12) (LRR O, P, T)  Delta Ochric (F13) (LRR P, T, U)  Beta Ochric (F13) (LRR P, T, U)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Hydric soil present?  Yes X No	_		(A4)		_		-	. , ,	,		
Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) (MLRA 153B)  5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Redox Depressions (F8) Very Shallow Dark Surface (TF12)  1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Other (Explain in Remarks)  Depleted Below Dark Surface (A11) Ton-Manganese Masses (F12) (LRR O, P, T) Iron-Manganese Masses (F12) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic.  Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (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)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Hydric soil present? Yes X No					<u></u>	Depleted	Matrix (F	3)			
Depleted Dark Surface (F7)  Muck Presence (A8) (LRR P, T, U)  Mark Presence (A8) (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)  Sandy Redox (S5)  Dark Surface (S7) (LRR P, S, T, U)  Strictive Layer (if observed):  Type: N/A  Depleted Dark Surface (F7)  Redox Depressions (F8)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Reduced Vertic (F13) (MLRA 151)  Reduced Vertic (F18) (MLRA 150A, 150B)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Petrictive Layer (if observed):  Type: N/A  Depth (inches): N/A  Hydric soil present? Yes X No	-			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)  Sandy Redox (S5)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Setrictive Layer (if observed):  Type: N/A  Depth (inches): N/A  Marl (F10) (LRR U)  Deptessions (F8)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	_				, —	Depleted	Dark Sur	face (F7)		Red Pare	nt Material (TF2)
1 cm Muck (A9) (LRR P, T)  Depleted Below Dark Suface (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)  Sandy Redox (S5)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Anomalous Bright Loamy Soil present?  Marl (F10) (LRR U)  Depleted Ochric (F11) (MLRA 151)  Iron-Manganese Masses (F12) (LRR O, P, T)  Jenta Ochric (F13) (LRR P, T, U)  Wetland hydrology must be present, unless disturbed or problematic.  Reduced Vertic (F18) (MLRA 150A, 150B)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Pestrictive Layer (if observed):  Type: N/A  Depth (inches): N/A  Hydric soil present? Yes X No	-	•	, , ,	,.,	<i>'</i> —			, ,		_	, ,
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)  Destrictive Layer (if observed):  Type: N/A  Depth (inches): N/A	-		, .		_			, ,			, ,
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)  Destrictive Layer (if observed):  Type:  N/A  Iron-Manganese Masses (F12) (LRR O, P, T)  Umbric Surface (F13) (LRR P, T, U)  Wetland hydrology must be present, unless disturbed or problematic.  Reduced Vertic (F18) (MLRA 150A, 150B)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Pestrictive Layer (if observed):  Type:  N/A  Hydric soil present?  Yes X  No	-	. , ,	- ,	(A11)		,	, ,	,	A 151)		,
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)  Sestrictive Layer (if observed):  Type:  N/A  Depth (inches):  N/A  Umbric Surface (F13) (LRR P, T, U)  Wetland hydrology must be present, unless disturbed or problematic.  Wetland hydrology must be present, unless disturbed or problematic.  Wetland hydrology must be present, unless disturbed or problematic.  Matrix (S4)  Reduced Vertic (F18) (MLRA 150A, 150B)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Pestrictive Layer (if observed):  Type:  N/A  Hydric soil present?  Yes X  No	_			(,,,,	_		,	, ,	,	O. P. T) 31111	a affective to the second of
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)  Destrictive Layer (if observed):  Type: N/A  Depth (inches): N/A  Delta Ochric (F17) (MLRA 151)  unless disturbed or problematic.  Reduced Vertic (F18) (MLRA 150A, 150B)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Hydric soil present? Yes X No	-			RA 150	Δ)		_			maicator	, , , ,
Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  strictive Layer (if observed):  Type: N/A  Depth (inches): N/A  Reduced Vertic (F18) (MLRA 150A, 150B)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Hydric soil present? Yes X No	-				_						
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)  estrictive Layer (if observed): Type: N/A  Depth (inches): N/A Hydric soil present? Yes X No	_	•		0, 0,	_			•			
Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Dark Surface (S7) (LRR P, S, T, U)  estrictive Layer (if observed):  Type: N/A  Depth (inches): N/A	-	-					,			-	
Dark Surface (S7) (LRR P, S, T, U) estrictive Layer (if observed): Type: N/A Depth (inches): N/A Hydric soil present? Yes X No	- '									•	3D)
Sestrictive Layer (if observed):  Type: N/A	_			T II)	_	Anomaio	us brigin	Loanly oc	) (1 20)	MERA 143A, 1330, 13	30)
Type:         N/A           Depth (inches):         N/A           Hydric soil present?         Yes           X         No		money or with a subject of	Section Control of	1, 0)							
Depth (inches): N/A Hydric soil present? Yes X No		0.007.00	observed):								
emarks:			I/A				_		Hydric s	oil present? Y	es X No No
alidino.	emarke:		-4000								
	ciliains.										

Project/Site: Harbor Island		Cit	ty/County: Nuece	County	Sampling Date:	March 19, 2019
Applicant/Owner: POCCA				State: TX	Sampling Point:	
Investigator(s): Ashley Bogra	and, Orlando Recio	Sec	ction, Township, R	ange: None		
Landform (hillslope, terrace, etc	.): Prairie	Lo	cal relief (concave	convex, none): Nor	ie Slope	(%): <b>0</b>
Subregion (LRR or MLRA): LRF	t T	Lat: 27.847125	000	Long: -97.06686	39 Datu	m: NAD83
Soil Map Unit Name: Mustang	Fine Sand, 0 to 1 perce	nt		N	WI classification:	
Are climatic / hydrologic condition	ons on the site typical for	this time of the y	ear? Yes _	X No (If	no, explain in Remark	s.)
Are vegetation, Soil _	, or Hydrology	significantly di	isturbed?	Are "normal circumst	ances" present? Ye	es X No
Are vegetation, Soil _						
		=3	2			
SUMMARY OF FINDING	5 – Attach site map	snowing sa	mpling point i	ocations, transe	ects, important re	atures, etc.
Hydrophytic Vegetation Prese	nt? Yes V	No				
		No	Is the Sampled	Area within a		
Hydric Soil Present?	Yes X	No	Wetland?	)	/esNo	X
Wetland Hydrology Present?	Yes	NoX				
Remarks:		***************************************				
HYDROLOGY		16675				
Wetland Hydrology Indicator	s:			Second	dary Indicators (minimu	ım of two required)
Primary Indicators (minimum of	of one is required; check	all that apply)		Sı	ırface Soil Cracks (B6)	
Surface Water (A1)		Aquatic Fauna	(B13)	_ Sp	parsely Vegetated Con-	cave Surface (B8)
High Water Table (A2)		Marl Deposits (I	B15) (LRR U)	Dr	rainage Patterns (B10)	
Saturation (A3)	_	Hydrogen Sulfic	de Odor (C1)	Mo	oss Trim Lines (B16)	
Water Marks (B1)		Oxidized Rhizos	spheres on Living	Roots (C3) _ Dr	y-Season Water Table	(C2)
Sediment Deposits (B2)		Presence of Re	educed Iron (C4)	Cr	ayfish Burrows (C8)	
Drift Deposits (B3)	<u></u> -	Recent Iron Rec	duction in Tilled So	oils (C6) Sa	aturation Visible on Aer	ial Imagery (C9)
Algal Mat or Crust (B4)		Thin Muck Surfa	ace (C7)	_ Ge	eomorphic Position (D2	2)
Iron Deposits (B5)		Other (Explain i	in Remarks)	Sh	nallow Aquitard (D3)	
Inundation Visible on Aeri	al Imagery (B7)			FA	AC-Neutral Test (D5)	
Water-Stained Leaves (B	9)			_ Sp	hagnum moss (D8) (L	RR T, U)
Field Observations:						
Surface water present?	Yes No_X	Depth (inches	s):			
Water table present?	Yes No X					
Saturation present?	Yes No X			Wetland Hydrology	Present? Yes	NoX
(includes capillary fringe)	N W 10-22					
Describe Recorded Data (stream	am gauge, monitoring we	II, aerial photos,	previous inspectio	ns), if available:		
Remarks:						
1						
1						
İ						

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot Size: 30' )  1 None	% Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant Species Across all Strata: (B)
5	-			Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/
6				Prevalence Index worksheet
7			-	
8				Total % Cover of: Multiply by:  OBL species 42 × 1 = 42
500/ -51-1-1		= Total Cove		
50% of total cover: 0	_ 20%	or total cover.		FACW species 60 x 2 = 120 FAC species 0 x 3 = 0
Sapliing/Shrub Stratum (Plot Size: 30' )				
1 None				
2				UPL species 0 x 5 = 0
3				Column totals(A)(B)
5				Prevalence Index = B/A = 1.63
				Hydrophytic Vegetation Indicators:
*				1 -Rapid Test for Hydrophytic Vegetation
				X 2 - Dominance Test is >50%
8		- Total Cave		X 3 - Prevalence Index is ≤3.0 <sup>1</sup>
F00/ - 6/- 1-1		= Total Cove		
50% of total cover: 0	_ 20%	of total cover:		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Herb Stratum (Plot Size: 30' )  1 Panicum repens	60	Υ	FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be
2 Flacebovic tuberculose			OBL	present, unless disturbed or problematic.
3 Schoenoplectus americanus			OBL	Definitions of Four Vegetation Strata:
NATE REPORTS AND ADDRESS OF THE PROPERTY OF TH				Tree - Woody plants, excluding vines 3 in. (7.6 cm) or
-			1 400	more in diameter at breast height (DBH), regardless of
			<del></del>	height.
7				Sapling/shrub - Woody plants, excluding vines, less that 3 in. DBH and greater than 3.28 ft (1 m) tall.
9				Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
10				
12				Woody vines - All woody vines greater than 3.28 ft in height.
	104	= Total Cove	r	
50% of total cover: 52	20%	of total cover.	20.8	
Woody Vine Stratum (Plot Size: 30' )				
1 None				
2				
3				
4				
5				
	0	= Total Cove	r	Hydrophytic vegetation
50% of total cover: 0	20%	of total cover.	0	present? Yes X No
marks: (If observed, list morphological adaptations belo	w).			

Sampling Point:	4	
Sampling Point.	4	

	scription:		to the dep	oth neede				r or confi	irm the at	osence of indica	ators.)
Depth	Color	Matrix (maiet)	%	Color		x Featur	Type <sup>1</sup>	Loc2		Toxturo	Domarka
(inches)		(moist)		Coloi	(moist)	_%_	Туре	LUCZ		Texture	Remarks
0-1	10YR	4/2	95	7.5YR	4 / 6			PL	Loamy	The second	
1-9	10YR	5 / 2		7.51K	4 / 0			- FL	Loamy		Shells and Debris
9-11	10YR	4/2	100	7 FVD	4 / 6	-				Sand	Shells and Debris
11-16	10YR	5 / 1	95	7.5YR	4 / 6	5	_ <u>c</u> _	PL_	Loamy	Sand	
											. — — — — — —
17		D-D-nleti	- DM-D	ladicand N	Antriu CC-/	Coursed	or Coate	Cond C	oine	ZI agation: DI =D:	on Lining Madda
- 10 C - 20 C -	STATE VARIANCE CONT.	n, D=Depleti	SWILES BUT KEE	SSCARSO.	90 7-210		S115-124-54	Sand Gr	ains.	Development Company	ore Lining, M=Matrix.
Hydric So	il Indicator	rs: (Applica	ible to all	LRRs, u	nless other	wise no	ited.)			Indicators for F	Problematic Hydric Soils <sup>3</sup> :
Histisol	(A1)			_	Polyvalue	Below S	urface (S	8) ( <b>LRR S</b>	i, T, U)	1 cm Muck (	(A9) (LRR O)
Histic E	pipedon (A	(2)		_	Thin Dark	Surface	(S9) (LRF	R, S, T, U	)	2 cm Muck (	(A10) (LRR S)
Black H	listic (A3)				Loamy Mu	cky Mine	eral (F1) (	LRR 0)		Reduced Ve	ertic (F18) (outside MLRA 150A,B)
Hydrog	en Sulfide	(A4)			Loamy Gle	eyed Mat	trix (F2)			Piedmont FI	loodplain Soils (F19) (LRR P, S, T)
Stratifie	ed Layers (/	A5)		X	Depleted N	Matrix (F	3)			Anomalous	Bright Loamy Soils (F20)
Organi	Bodies (A	6) (LRR P,	T, U)		Redox Dar	rk Surfac	ce (F6)			(MLRA 153	B)
5 cm M	lucky Miner	al (A7) (LRF	R P, T, U)		Depleted [	Dark Sur	face (F7)			Red Parent	Material (TF2)
	-	(8) (LRR U)		_	Redox De	pression	s (F8)			Very Shallov	w Dark Surface (TF12)
1 —	luck (A9) (L			_	Marl (F10)	(LRR U	)			Other (Expla	ain in Remarks)
-	, , ,	ark Suface (	(A11)	_	Depleted (	-		A 151)			,
1	ark Surfac		,		Iron-Mang				O. P. T)	31	& handers had be a second of the second
<del>-</del>		ox (A16) <b>(M</b> I	DA 150A	, –	Umbric Su		-		-,.,.,		of hydrophytic vegetation and rology must be present,
I —		eral (S1) <b>(LF</b>		· –	Delta Ochi						rbed or problematic.
1 —	•		(K O, S)	_	Reduced \				50B)		
_	Gleyed Ma					•	, ,				
X Sandy				_	Piedmont					IOA 4520 452D	
	d Matrix (S	-		_	Anomalou	s Bright	Loamy So	ils (FZU)	(MLRA 14	19A, 153C, 153D	)
		(LRR P, S,	1, 0)								
	Control of the latest of the l	observed):									
Type: Depth (i	N/A	N/A				-		Hydric s	soil prese	nt? Yes	X No
Берит	nones). 1	1/2				-8		riyano c	- prece		
Remarks:											
1											
			*								
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1											
1											

Project/Site: Harbor Island	City/County: Nuece County Sampling Date: March 19, 2019
Applicant/Owner: POCCA	State: TX Sampling Point: 5
Investigator(s): Ashley Bogrand, Orlando Recio	Section, Township, Range: None
Landform (hillslope, terrace, etc.): Prairie	Local relief (concave, convex, none): Concave Slope (%): 0-1
Subregion (LRR or MLRA): LRR T Lat: 27.84	
Soil Map Unit Name: Mustang Fine Sand, 0 to 1 percent	NWI classification:
	the year? Yes X No (If no, explain in Remarks.)
	ntly disturbed? Are "normal circumstances" present? YesX No
Are vegetation , Soil , or Hydrologynaturally	problematic? (If needed, explain any answers in Remarks.)
- Control - Cont	g sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area within a
Hydric Soil Present? Yes X No	Wetland? Yes X No
Wetland Hydrology Present? Yes X No	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that app	ly) Surface Soil Cracks (B6)
	auna (B13) Sparsely Vegetated Concave Surface (B8)
	osits (B15) (LRR U) Drainage Patterns (B10)
<u> </u>	Sulfide Odor (C1) Moss Trim Lines (B16)
_	Rhizospheres on Living Roots (C3)  Dry-Season Water Table (C2)
	of Reduced Iron (C4) Crayfish Burrows (C8)
	on Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
I — 1 1 1 — 1 — 1 — 1 — 1 — 1 — 1 — 1 —	k Surface (C7) Geomorphic Position (D2)
	plain in Remarks) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)
Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)
Field Observations:	
Surface water present? Yes No X Depth (i	inches):
Water table present? Yes No_X Depth (i	inches):
Saturation present? Yes X No Depth (i	inches): 9 Wetland Hydrology Present? Yes X No
Describe Recorded Data (stream gauge, monitoring well, aerial ph	notos, previous inspections), if available:
Remarks:	
	φ.

VEGETATIO	M (Entir Strata)	Use scientific names	of plants
VEGETATION	N IFOUI Stiatai-	Use scientific harries	OI DIAILIS

· · · · · · · · · · · · · · · · · · ·	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot Size: 30')	% Cover		Status	2500 DO 2000 DO 100 DO 100 DO	
1 None	-10 00101			Number of Dominant Species That Are OBL, FACW, or FAC: 1	(A)
2				That Ale OBE, FACW, of FAC.	_ (//)
2				Total Number of Dominant	(D)
3				Species Across all Strata: 1	(B)
4				Percent of Dominant Species that	
5				are OBL, FACW, or FAC: 100.00%	(A/E
6				S. I. I.d. add to the control of the	
7				Prevalence Index worksheet	
8				Total % Cover of: Multiply by:	_
	0	= Total Cover		OBL species 10 x1 = 10	_
50% of total cover: 0	20%	of total cover:	0	FACW species 99 x 2 = 198	_
Sapliing/Shrub Stratum (Plot Size: 30' )				FAC species 0 x 3 = 0	
1 None				FACU species 0 x 4 = 0	15
2		157 15 154		UPL species 0 x 5 = 0	105
3				Column totals 109 (A) 208	— (B)
Y .					_ \-/
5		300	-12	Prevalence Index = B/A = 1.9	1
				Hydrophytic Vegetation Indicators:	
6					
7				1 -Rapid Test for Hydrophytic Vegetation	
8				X 2 - Dominance Test is >50%	
	0	- Tatal Carra		1	
		= Total Cover		X 3 - Prevalence Index is ≤3.01	
50% of total cover: 0		of total cover:		X 3 - Prevalence Index is ≤3.0°  Problematic Hydrophytic Vegetation¹ (Explain	1)
				30	1)
Herb Stratum (Plot Size: 30' )	20%	of total cover:	0	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain	
Herb Stratum (Plot Size: 30' )  1 Panicum repens	20%	of total cover:	0 FACW	30	
Herb Stratum (Plot Size: 30' )  1 Panicum repens 2 Eleocharis tuberculosa	99 10	of total cover:	0	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain <sup>1</sup> Indicators of hydric soil and wetland hydrology m	
Herb Stratum (Plot Size: 30' )  1 Panicum repens	99 10	of total cover:	0 FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain <sup>1</sup> Indicators of hydric soil and wetland hydrology material present, unless disturbed or problematic.  Definitions of Four Vegetation Strata:	ust be
Herb Stratum (Plot Size: 30' )  1 Panicum repens 2 Eleocharis tuberculosa 3	99	of total cover:	0 FACW OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain <sup>1</sup> Indicators of hydric soil and wetland hydrology mesent, unless disturbed or problematic.	ust be
Herb Stratum (Plot Size: 30' )  1 Panicum repens 2 Eleocharis tuberculosa 3	99 10	of total cover:	FACW OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain <sup>1</sup> Indicators of hydric soil and wetland hydrology mesent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm	ust be
Herb Stratum (Plot Size: 30' )  1 Panicum repens 2 Eleocharis tuberculosa 3 4 5	99 10	Y N	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain <sup>1</sup> Indicators of hydric soil and wetland hydrology mesent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm more in diameter at breast height (DBH), regardle height.	n) or
Herb Stratum (Plot Size: 30' )  1 Panicum repens 2 Eleocharis tuberculosa 3 4	99 10	Y N	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain <sup>1</sup> Indicators of hydric soil and wetland hydrology mesent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm more in diameter at breast height (DBH), regardle height.  Sapling/shrub - Woody plants, excluding vines,	n) or
Herb Stratum (Plot Size: 30' )  1 Panicum repens 2 Eleocharis tuberculosa 3 4 5 6	99 10	of total cover:	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain <sup>1</sup> Indicators of hydric soil and wetland hydrology mesent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm more in diameter at breast height (DBH), regardle height.	n) or
Herb Stratum (Plot Size: 30' )  1 Panicum repens 2 Eleocharis tuberculosa 3 4 5 6 7	99 10	of total cover:	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain <sup>1</sup> Indicators of hydric soil and wetland hydrology mesent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 or more in diameter at breast height (DBH), regardle height.  Sapling/shrub - Woody plants, excluding vines, 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regardle	n) or ess of
Herb Stratum (Plot Size: 30' )  1 Panicum repens 2 Eleocharis tuberculosa 3 4 5 6 7 8 9	99 10	Y N	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain <sup>1</sup> Indicators of hydric soil and wetland hydrology mesent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 or more in diameter at breast height (DBH), regardle height.  Sapling/shrub - Woody plants, excluding vines, 3 in. DBH and greater than 3.28 ft (1 m) tall.	n) or ess of
Herb Stratum (Plot Size: 30' )  1 Panicum repens 2 Eleocharis tuberculosa 3 4 5 6 7 8 9 9	99 10	Y N	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain <sup>1</sup> Indicators of hydric soil and wetland hydrology mesent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 or more in diameter at breast height (DBH), regardle height.  Sapling/shrub - Woody plants, excluding vines, 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regard size, and woody plants less than 3.28 ft tall.	n) or ess of ess tha
Herb Stratum (Plot Size: 30' )	99 10	Y N	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain <sup>1</sup> Indicators of hydric soil and wetland hydrology mesent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 or more in diameter at breast height (DBH), regardle height.  Sapling/shrub - Woody plants, excluding vines, 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regard size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28	n) or ess of ess tha
Herb Stratum (Plot Size: 30' )	99 10	of total cover:	FACW OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain <sup>1</sup> Indicators of hydric soil and wetland hydrology mesent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 or more in diameter at breast height (DBH), regardle height.  Sapling/shrub - Woody plants, excluding vines, 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regard size, and woody plants less than 3.28 ft tall.	n) or ess of ess that
Herb Stratum (Plot Size: 30' )	99 10	Y N	FACW OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain <sup>1</sup> Indicators of hydric soil and wetland hydrology mesent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 or more in diameter at breast height (DBH), regardle height.  Sapling/shrub - Woody plants, excluding vines, 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regard size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28	n) or ess of ess that
Panicum repens	20%	of total cover:	O FACW OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain <sup>1</sup> Indicators of hydric soil and wetland hydrology mesent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 or more in diameter at breast height (DBH), regardle height.  Sapling/shrub - Woody plants, excluding vines, 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regard size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28	n) or ess of ess that
Herb Stratum	20%	Y N = Total Cover	O FACW OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain <sup>1</sup> Indicators of hydric soil and wetland hydrology mesent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 or more in diameter at breast height (DBH), regardle height.  Sapling/shrub - Woody plants, excluding vines, 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regard size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28	n) or ess of ess tha
Panicum repens	20%	Y N = Total Cover	O FACW OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain <sup>1</sup> Indicators of hydric soil and wetland hydrology mesent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 or more in diameter at breast height (DBH), regardle height.  Sapling/shrub - Woody plants, excluding vines, 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regard size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28	n) or ess of
Panicum repens	99 10 10 109 20%	Y N = Total Cover:	O FACW OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain <sup>1</sup> Indicators of hydric soil and wetland hydrology mesent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 or more in diameter at breast height (DBH), regardle height.  Sapling/shrub - Woody plants, excluding vines, 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regard size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28	n) or ess of
Herb Stratum	20% 99 10 109 20%	Y N = Total Cover:	O FACW OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain <sup>1</sup> Indicators of hydric soil and wetland hydrology mesent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 or more in diameter at breast height (DBH), regardle height.  Sapling/shrub - Woody plants, excluding vines, 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regard size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28	n) or ess of
Panicum repens	20% 99 10 109 20%	Y N = Total Cover:	O FACW OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain <sup>1</sup> Indicators of hydric soil and wetland hydrology mesent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 or more in diameter at breast height (DBH), regardle height.  Sapling/shrub - Woody plants, excluding vines, 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regard size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28	n) or ess of
Panicum repens	20% 99 10 109 20%	Y N = Total Cover:	O FACW OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain <sup>1</sup> Indicators of hydric soil and wetland hydrology mesent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 or more in diameter at breast height (DBH), regardle height.  Sapling/shrub - Woody plants, excluding vines, 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regard size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28	n) or ess of
Panicum repens	20% 99 10 109 20%	Y N = Total Cover:	O FACW OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain <sup>1</sup> Indicators of hydric soil and wetland hydrology mesent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 or more in diameter at breast height (DBH), regarded height.  Sapling/shrub - Woody plants, excluding vines, 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regards size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28 height.	n) or ess of
Panicum repens	20% 99 10 109 20%	of total cover:  Y N  = Total Cover:	OBL OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain <sup>1</sup> Indicators of hydric soil and wetland hydrology mesent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 or more in diameter at breast height (DBH), regardle height.  Sapling/shrub - Woody plants, excluding vines, 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regard size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28	n) or ess of ess tha

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

5.125 (1997) 15.00 (1997) 12.00 (1997)	
Sampling Point:	5
oumpling Folia.	

Profile Description: (Describe to the depth Depth Matrix	needed to document Redox Fea		r or confir	m the absence of indicator	rs.)
Depth Matrix (inches) Color (moist) %	Color (moist) %		Loc2	Texture	Remarks
0-3 10YR 4 / 2 100	70	.,,,,,		Sandy Clay	Nemarks
3-12 10YR 6 / 2 100	-			Sand	
12-16 2.5YR 6 / 1 100				Loamy Sand	
12-10 2.51K 0 / 1 100				Louiny Janu	
					7.00
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Red	uced Matrix, CS=Cover	ed or Coated	Sand Gra	ins. <sup>2</sup> Location: PL=Pore	Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all LF	RRs, unless otherwise	noted.)		Indicators for Pro	blematic Hydric Soils <sup>3</sup> :
Histisol (A1)	Polyvalue Belov	w Surface (S	B) (LRR S,	T, U) 1 cm Muck (A9	) (LRR 0)
Histic Epipedon (A2)	Thin Dark Surfa	ice (S9) (LRF	R, S, T, U)	2 cm Muck (A1	0) (LRR S)
Black Histic (A3)	Loamy Mucky N	Mineral (F1) (	LRR O)	Reduced Vertice	(F18) (outside MLRA 150A,B)
Hydrogen Sulfide (A4)	Loamy Gleyed I	Matrix (F2)		Piedmont Floor	dplain Soils (F19) (LRR P, S, T)
Stratified Layers (A5)	X Depleted Matrix	(F3)			ght Loamy Soils (F20)
Organic Bodies (A6) (LRR P, T, U)	Redox Dark Sur			(MLRA 153B)	
5 cm Mucky Mineral (A7) (LRR P, T, U)	Depleted Dark S			Red Parent Ma	
Muck Presence (A8) (LRR U)	Redox Depressi				Park Surface (TF12)
1 cm Muck (A9) (LRR P, T)	Mari (F10) (LRF			Other (Explain	
Depleted Below Dark Suface (A11)	Depleted Ochric		A 151)	Other (Explain	iii Keilaks)
Thick Dark Surface (A12)	Iron-Manganese			D T)	
_	-			indicators of fi	ydrophytic vegetation and
Coast Prairie Redox (A16) (MLRA 150A)	Umbric Surface	N		950.60 0.0	ogy must be present, d or problematic.
Sandy Mucky Mineral (S1) (LRR O, S)	Delta Ochric (F1				d of problematic.
Sandy Gleyed Matrix (S4)	Reduced Vertic	550 (O To			
_ Sandy Redox (S5)	Piedmont Flood	J. 70	37.50	S	
_ Stripped Matrix (S6)	Anomalous Brig	tht Loamy So	ils (F20) (F	MLRA 149A, 153C, 153D)	
_ Dark Surface (S7) (LRR P, S, T, U)					
Restrictive Layer (if observed):					
Type: N/A Depth (inches): N/A			Hydric so	oil present? Yes	X No
Depar (mores).			riyano se	m present res _	X 140
Remarks:					
1					
1					
1					

Project/Site: Harbor Island		City	//County: Nuece	County	Sampling Date:	March 19, 2019
Applicant/Owner: POCCA				State: TX		
Investigator(s): Ashley Bogrand,	Orlando Recio	Sec	tion, Township,	Range: None		
Landform (hillslope, terrace, etc.): F	20.000	Loc	cal relief (concav	e, convex, none): Co	ncave Slope	(%): <b>0-1</b>
Subregion (LRR or MLRA): LRR T		The first contract of the contract of		Long: -97.0669		ım: NAD83
Soil Map Unit Name: Mustang Fine		. 1			NWI classification:	
Are climatic / hydrologic conditions or			ear? Yes	X No (	If no, explain in Remark	(s.)
Are vegetation, Soil			-			
Are vegetation, Soil						
SUMMARY OF FINDINGS.		AS USANO				
Hydrophytic Vegetation Present?	Yes	NoX	le the Sample	d Area within a		
Hydric Soil Present?	Yes X	No	Wetland?		Yes No	X
Wetland Hydrology Present?	Yes	No X				
Remarks:		A-000000				
HYDROLOGY						
Wetland Hydrology Indicators:				Secon	dary Indicators (minimu	um of two required)
Primary Indicators (minimum of one	is required; check	all that apply)			urface Soil Cracks (B6)	
Surface Water (A1)		Aquatic Fauna (	B13)		parsely Vegetated Con	
High Water Table (A2)	· <del></del> :	Marl Deposits (E	315) (LRR U)		rainage Patterns (B10)	W 13
Saturation (A3)	_	Hydrogen Sulfid			loss Trim Lines (B16)	
Water Marks (B1)	_	Oxidized Rhizos	pheres on Living		ry-Season Water Table	(C2)
Sediment Deposits (B2)		Presence of Rec			rayfish Burrows (C8)	
Drift Deposits (B3)	_	Recent Iron Red	luction in Tilled S	ennigerani, parametri	aturation Visible on Aer	rial Imagery (C9)
Algal Mat or Crust (B4)	_	Thin Muck Surfa	ice (C7)		eomorphic Position (D2	있는 20시키는 그 없이 함께 2015년 전투 사용 최고 2016년 2017
Iron Deposits (B5)		Other (Explain in	Remarks)		hallow Aquitard (D3)	3f.
Inundation Visible on Aerial Im	agery (B7)		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1		AC-Neutral Test (D5)	
Water-Stained Leaves (B9)				_ s	phagnum moss (D8) (L	.RR T, U)
Field Observations:					, , , ,	
Persentation of the Association of the Control of t	Yes No X	Depth (inches)	:			
	Yes No X			1		
and a second of		Depth (inches)	01	Wetland Hydrology	y Present? Yes	No X
(includes capillary fringe)				1		
Describe Recorded Data (stream ga	auge, monitoring we	ell, aerial photos, p	previous inspect	ions), if available:		
	- War					
Remarks:						

ETATION (Four Strata) - Use scientific na	mes of pla	IIIO		Sampling Point: 6	
	Absolute	Dominant	Indicator	Dominance Test worksheet:	
ree Stratum (Plot Size: 30')	% Cover	Species?	Status	Number of Dominant Species	
None				That Are OBL, FACW, or FAC: 0	(A)
2				Total Number of Dominant	
				Species Across all Strata: 1	(B)
				Percent of Dominant Species that	
				are OBL, FACW, or FAC: 0.00%	(A
		-			
				Prevalence Index worksheet	
				Total % Cover of: Multiply by:	
	0	= Total Cove		OBL species 0 x1= 0	
50% of total cover: 0		of total cover:		FACW species 0 x 2 = 0	
The second secon	_ 2070	OI total cover.		FAC species 0 x3 = 0	
apliing/Shrub Stratum (Plot Size: 30' )				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	•
None				Distributed and the section of the s	
				UPL species 2 x 5 = 10	
				Column totals (A) 410	(B
				Prevalence Index = B/A = 4.02	-
				Hydrophytic Vegetation Indicators:	
				1 -Rapid Test for Hydrophytic Vegetation	
				2 - Dominance Test is >50%	
<u> </u>				3 - Prevalence Index is ≤3.01	
·	0	= Total Cove	r	3 - Prevalence Index is \$3.0	
		= Total Cove of total cover:		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
50% of total cover: 0				The state of the s	
50% of total cover: 0 erb Stratum (Plot Size: 30' )	20%	of total cover:	0	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	t be
50% of total cover: 0 erb Stratum (Plot Size: 30' ) Schizachyrium scoparium	20%	of total cover:	0 FACU	The state of the s	t be
50% of total cover: 0  erb Stratum (Plot Size: 30' )  Schizachyrium scoparium  Vicia sativa	90	of total cover:	FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology mus	t be
50% of total cover: 0  erb Stratum (Plot Size: 30' )  Schizachyrium scoparium  Vicia sativa  Sisyrinchium langloisii	90 10 2	of total cover:	FACU FACU UPL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology mus present, unless disturbed or problematic.	
50% of total cover: 0 erb Stratum (Plot Size: 30' ) Schizachyrium scoparium Vicia sativa Sisyrinchium langloisii	90 10 2	of total cover:	FACU FACU UPL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology mus present, unless disturbed or problematic.  Definitions of Four Vegetation Strata:	or
50% of total cover: 0 erb Stratum (Plot Size: 30' ) Schizachyrium scoparium Vicia sativa Sisyrinchium langloisii	90 10 2	of total cover:	FACU FACU UPL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology mus present, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm)	or
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50% of total cover: 0 erb Stratum (Plot Size: 30' ) Schizachyrium scoparium Vicia sativa Sisyrinchium langloisii	90 10 2	of total cover:	FACU FACU UPL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology muspresent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm) more in diameter at breast height (DBH), regardless height.  Sapling/shrub - Woody plants, excluding vines, les 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regardless	or of s th
50% of total cover: 0 erb Stratum (Plot Size: 30' ) Schizachyrium scoparium Vicia sativa Sisyrinchium langloisii	90 10 2	of total cover:	FACU FACU UPL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology muspresent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm) more in diameter at breast height (DBH), regardless height.  Sapling/shrub - Woody plants, excluding vines, less 3 in. DBH and greater than 3.28 ft (1 m) tall.	or of s th
50% of total cover: 0 erb Stratum (Plot Size: 30' ) Schizachyrium scoparium Vicia sativa Sisyrinchium langloisii	90 10 2	of total cover:	FACU FACU UPL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology muspresent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm) more in diameter at breast height (DBH), regardless height.  Sapling/shrub - Woody plants, excluding vines, les 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regardless	or of
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50% of total cover: 0  erb Stratum (Plot Size: 30' )  Schizachyrium scoparium  Vicia sativa  Sisyrinchium langloisii	20% 90 10 2	of total cover:	FACU FACU UPL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology muspresent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm) more in diameter at breast height (DBH), regardless height.  Sapling/shrub - Woody plants, excluding vines, les 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regardle size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28 ft	or of
50% of total cover: 0  erb Stratum (Plot Size: 30' )  Schizachyrium scoparium  Vicia sativa  Sisyrinchium langloisii	90 10 2	of total cover:  Y N N = Total Cove	FACU FACU UPL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology muspresent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm) more in diameter at breast height (DBH), regardless height.  Sapling/shrub - Woody plants, excluding vines, les 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regardle size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28 ft	or of
50% of total cover: 0  erb Stratum (Plot Size: 30' )  Schizachyrium scoparium  Vicia sativa  Sisyrinchium langloisii	90 10 2	of total cover:	FACU FACU UPL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology muspresent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm) more in diameter at breast height (DBH), regardless height.  Sapling/shrub - Woody plants, excluding vines, les 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regardle size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28 ft	or of
50% of total cover: 0  erb Stratum (Plot Size: 30' )  Schizachyrium scoparium  Vicia sativa  Sisyrinchium langloisii  50% of total cover: 51  coody Vine Stratum (Plot Size: 30' )	90 10 2	of total cover:  Y N N = Total Cove	FACU FACU UPL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology muspresent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm) more in diameter at breast height (DBH), regardless height.  Sapling/shrub - Woody plants, excluding vines, les 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regardle size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28 ft	or of
50% of total cover: 0  erb Stratum (Plot Size: 30' )  Schizachyrium scoparium  Vicia sativa  Sisyrinchium langloisii  50% of total cover: 51  Toody Vine Stratum (Plot Size: 30' )  None	20% 90 10 2	of total cover:  Y N N = Total Cove	FACU FACU UPL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology muspresent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm) more in diameter at breast height (DBH), regardless height.  Sapling/shrub - Woody plants, excluding vines, les 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regardle size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28 ft	or of
50% of total cover: 0  erb Stratum (Plot Size: 30' )  Schizachyrium scoparium  Vicia sativa  Sisyrinchium langloisii  1 2 50% of total cover: 51 None	20% 90 10 2 102 20%	of total cover:  Y N N = Total Cove	FACU FACU UPL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology muspresent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm) more in diameter at breast height (DBH), regardless height.  Sapling/shrub - Woody plants, excluding vines, les 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regardle size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28 ft	or of
50% of total cover: 0  erb Stratum (Plot Size: 30' )  Schizachyrium scoparium  Vicia sativa  Sisyrinchium langloisii  50% of total cover: 51  None	20% 90 10 2 102 20%	of total cover:  Y N N = Total Cove	FACU FACU UPL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology muspresent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm) more in diameter at breast height (DBH), regardless height.  Sapling/shrub - Woody plants, excluding vines, les 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regardle size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28 ft	or of
50% of total cover: 0  erb Stratum (Plot Size: 30' )  Schizachyrium scoparium  Vicia sativa  Sisyrinchium langloisii  50% of total cover: 51  None	20% 90 10 2 102 20%	of total cover:  Y N N = Total Cove	FACU FACU UPL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology muspresent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm) more in diameter at breast height (DBH), regardless height.  Sapling/shrub - Woody plants, excluding vines, les 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regardle size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28 ft	or of
50% of total cover: 0 erb Stratum (Plot Size: 30' )  Schizachyrium scoparium  Vicia sativa  Sisyrinchium langloisii  50% of total cover: 51 Voody Vine Stratum (Plot Size: 30' )  None	20% 90 10 2 102 20%	of total cover:  Y N N = Total Cove	FACU FACU UPL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology muspresent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm) more in diameter at breast height (DBH), regardless height.  Sapling/shrub - Woody plants, excluding vines, les 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regardle size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28 ft height.	or of
50% of total cover: 0  erb Stratum (Plot Size: 30' )  Schizachyrium scoparium  Vicia sativa  Sisyrinchium langloisii  4  5  6  7  8  9  10  11  20  50% of total cover: 51  Voody Vine Stratum (Plot Size: 30' )  None	20% 90 10 2 102 20%	of total cover:  Y N N = Total Cove	FACU FACU UPL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology muspresent, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 in. (7.6 cm) more in diameter at breast height (DBH), regardless height.  Sapling/shrub - Woody plants, excluding vines, les 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regardle size, and woody plants less than 3.28 ft tall.  Woody vines - All woody vines greater than 3.28 ft	or of

Profile De Depth	scription:		scribe t atrix	o the de	pth neede	ed to		nent the		r or conf	irm the a	bsence of indicators.	)			
inches)	Color			%	Color	(mo		%	Type <sup>1</sup>	Loc2		Texture	Remarks			
0-2	10YR		12	100		(,,,,					Loam	y Sand	remarks			
2-10	10YR		/ 3	97	10YR	6	/ 8	3		PL		y Sand				
10-15	10YR	_	12	98	10YR	_	/ 6	2	c	PL		y Loam				
rpe: C=Co	ncentration	, D=	Depletion	on, RM=F	Reduced N	Matri:	x, CS=(	Covered	or Coated	Sand Gr	ains.	<sup>2</sup> Location: PL=Pore Li	ning, M=Matrix.			
	I Indicator										20/00/2000		ematic Hydric Soils <sup>3</sup> :			
Histisol									Surface (S	8) /I DD S	T 10	1 cm Muck (A9) (	•			
	pipedon (A	21							(S9) (LRF		g and more		530-4 65-5333-61 <b>8</b> 5			
	listic (A3)	2)							eral (F1) (		5	2 cm Muck (A10)	1.000 (100 - C) (100 / 100 )			
	en Sulfide (	(1.4)								LRR O)		Reduced Vertic (F18) (outside MLRA 150A,B)				
_						Loamy Gleyed Matrix (F2)						Piedmont Floodplain Soils (F19) (LRR P, S, T)				
- 5000000000000000000000000000000000000	d Layers (A		DD D 3	- 115	X	Depleted Matrix (F3)  Redox Dark Surface (F6)						Anomalous Bright Loamy Soils (F20)				
50100000000	Bodies (A			37041-050	<u></u>							(MLRA 153B)				
	ucky Miner			P, T, U)	_				rface (F7)			Red Parent Mater	200-2-4 P. 1. 20 20 E.			
	resence (A	30.00			_			pression				Very Shallow Dark	k Surface (TF12)			
_ 1 cm M	uck (A9) (L	RR I	P, T)		_			(LRR U				Other (Explain in )	Remarks)			
Deplete	d Below Da	ark S	Suface (	A11)	_	Dep	oleted (	Ochric (F	11) (MLR	A 151)						
Thick D	ark Surface	e (A1	12)		_	Iron	n-Mang	anese M	lasses (F1	2) (LRR	O, P, T)	3Indicators of hyd	rophytic vegetation and			
Coast F	rairie Redo	ox (A	16) <b>(M</b> L	RA 150A	.)	Um	bric Su	rface (F	13) (LRR	P, T, U)			must be present,			
Sandy N	Mucky Mine	eral (	S1) (LR	R O, S)		Del	ta Ochr	ic (F17)	(MLRA 1	51)		unless disturbed of	or problematic.			
Sandy (	Gleyed Mat	rix (S	64)			Red	duced \	/ertic (F	18) (MLRA	150A, 1	50B)					
Sandy F	Redox (S5)				14 17	Pie	dmont l	Floodpla	ain Soils (F	19) (MLF	A 149A)					
Stripped	Matrix (Se	6)			98 <del></del>	Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)										
Dark Su	ırface (S7)	(LR	R P, S,	Γ, U)	-											
-	Layer (if					_										
Type:	N/A		,													
Depth (ir	nches): N	I/A						-		Hydric s	oil pres	ent? Yes )	( No			
		-				_										
lemarks:																

Project/Site: Harbor Island	City/County: Nuece County Sampling Date: March 19, 2019
Applicant/Owner: POCCA	State: TX Sampling Point: 7
Investigator(s): Ashley Bogrand, Orlando Recio	Section, Township, Range: None
Landform (hillslope, terrace, etc.): Prairie	Local relief (concave, convex, none): Concave Slope (%): 0-1
Subregion (LRR or MLRA): LRR T Lat: 27.84	
Soil Map Unit Name: Mustang Fine Sand, 0 to 1 percent	NWI classification:
	f the year? Yes X No (If no, explain in Remarks.)
	antly disturbed? Are "normal circumstances" present? Yes _X No
	y problematic? (If needed, explain any answers in Remarks.)
	g sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes NoX	Is the Sampled Area within a
Hydric Soil Present? Yes X No	Wetland? Yes No X
Wetland Hydrology Present? Yes NoX	
Remarks:	
HADBOLOGA	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that app	and the second s
	auna (B13) Sparsely Vegetated Concave Surface (B8)
	osits (B15) (LRR U) Drainage Patterns (B10)
	n Sulfide Odor (C1) Moss Trim Lines (B16)
	Rhizospheres on Living Roots (C3) Dry-Season Water Table (C2)
	of Reduced Iron (C4) Crayfish Burrows (C8)
	on Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
	k Surface (C7) Geomorphic Position (D2)
	(plain in Remarks) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)
Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)
Field Observations:	
Surface water present? Yes No_X Depth (i	
Water table present? Yes No_X Depth (i	
Saturation present? Yes No X Depth (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial ph	0 2 2
Describe Recorded Data (stream gauge, monitoring well, dental pr	notos, previous inspections), ii available.
Remarks:	
remands	

Tree Stratum (Plot	Size: 30' )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 None						Number of Dominant Species That Are OBL, FACW, or FAC:1 (A
2						Total Number of Dominant
3						Species Across all Strata: 2 (B
5				16-11/16 18/19		Percent of Dominant Species that are OBL, FACW, or FAC: 50.00% (A
_	AMP -					Prevalence Index worksheet
						Total % Cover of: Multiply by:
			0	= Total Cover		OBL species0 x 1 =0
	50% of total cover: _	0	20%	of total cover:	0	FACW species 0 x 2 = 0
apliing/Shrub Stratum	n_(Plot Size: 15'			ente-contrata en estado en estado en estado en estado en estado en estado en entre en estado en entre en estad		FAC species 20 x 3 = 60
1 None						FACU species ' 74 x 4 = 296
2						UPL species 0 x 5 = 0
SEE						Column totals 94 (A) 356 (B
1						, , , , , , , , , , , , , , , , , , , ,
-				-		Prevalence Index = B/A = 3.79
						Hydrophytic Vegetation Indicators:
-				<del></del>		1 -Rapid Test for Hydrophytic Vegetation
						2 - Dominance Test is >50%
			0	= Total Cover		3 - Prevalence Index is ≤3.0 <sup>1</sup>
	50% of total cover:	n	personal and	of total cover:		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
erb Stratum (Plot	Size: 5' )		20701	or total cover.		- Problematic Hydrophytic Vegetation (Explain)
1 Anagallis arven			70	Υ	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be
2 Arundo donax			20	Y	FAC	present, unless disturbed or problematic.
3 Vicia sativa	-=:::::::::::::::::::::::::::::::::::::		4	N	=	
			4		FACU	Definitions of Four Vegetation Strata:
4					FACU	Tree - Woody plants, excluding vines 3 in. (7.6 cm) or
8						Tree - Woody plants, excluding vines 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
5						Tree - Woody plants, excluding vines 3 in. (7.6 cm) or
6						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 the
5 6 7 8						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 th. 3 in. DBH and greater than 3.28 ft (1 m) tall.
5 6 7 8						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 the
5 6 7 8 9						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 th 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.
5 6 7 8 9 0						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 th. 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regardless of the same plants.
5 6 7 8 8 9						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 th 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 vines - All woody vines greater than 3.28 ft in
5 6 7 8 8 9			94	= Total Cover		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 th 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 vines - All woody vines greater than 3.28 ft in
5 6 7 8 8 9 9	50% of total cover:	47	94			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 th 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 vines - All woody vines greater than 3.28 ft in
5		47	94	= Total Cover		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 th 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 vines - All woody vines greater than 3.28 ft in
5	50% of total cover:_ (Plot Size:	47)	94 20% (	= Total Cover:		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 th 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 vines - All woody vines greater than 3.28 ft in
5	50% of total cover:_ (Plot Size:	47)	94 20% (	= Total Cover:		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 th 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 vines - All woody vines greater than 3.28 ft in
5	50% of total cover:_ (Plot Size:	47)	94 20% (	= Total Cover:		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 th 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 vines - All woody vines greater than 3.28 ft in
5	50% of total cover:_ (Plot Size:	47)	94 20% (	= Total Cover:		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 th 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 vines - All woody vines greater than 3.28 ft in
5	50% of total cover:_ (Plot Size:	47)	94 20% (	= Total Cover:	18.8	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 th 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 vines - All woody vines greater than 3.28 ft in
5	50% of total cover:_ (Plot Size:	47)	94 20% (	= Total Cover:	18.8	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 vines - All woody vines greater than 3.28 ft in height.

Profile De Depth	scription:	130	scribe t	to the de	epth need		nent the		or or confi	rm the a	bsence of indicator	rs.)
(inches)	Color			%	Color	(moist)	%	Type <sup>1</sup>	Loc2		Texture	Remarks
0-2	10YR		12	100							y Sand	
2-10	10YR		/ 3	97	10YR	6 / 8	3	С	PL		y Sand	
	27 COSE (40%)		12	98	10YR	5 / 6	2	- C	PL			
10-15	10YR	0	1		1011	3 / 0				Sandy	/ Loam	
Hydric So  Histisol  Histic E  Black F  Hydrog  Stratifie	il Indicator	rs: (/ \(\alpha\)2) (\(\alpha\)4)	Applica	able to a		Matrix, CS=C nless other Polyvalue Thin Dark Loamy Mu Loamy Gle Depleted M Redox Dar	wise no Below S Surface cky Min eyed Ma Matrix (F	oted.) Surface (S e (S9) (LR eral (F1) ( etrix (F2)	8) (LRR S R, S, T, U)	, T, U)	1 cm Muck (A9 2 cm Muck (A1 Reduced Vertice Piedmont Floor	oblematic Hydric Soils <sup>3</sup> :  () (LRR O)  () (LRR S)  () (F18) (outside MLRA 150A,B)  (dplain Soils (F19) (LRR P, S, T)  (ght Loamy Soils (F20)
5 cm M	lucky Miner	al (A	7) (LRF	R P. T. U	)	Depleted D	ark Su	rface (F7)			Red Parent Ma	iterial (TF2)
	resence (A			.,,,,,	<i>'</i> –	Redox Dep						Oark Surface (TF12)
					_			grounde i verdu No				and the common section
	luck (A9) (L					Marl (F10)					<ul> <li>Other (Explain</li> </ul>	in Remarks)
	ed Below D			(A11)	_	Depleted C			500 St. 100 St			
-	ark Surfac				_	Iron-Manga				O, P, T)	3Indicators of h	ydrophytic vegetation and
_ Coast F	Prairie Redo	A) xc	16) (MI	LRA 150	A)	Umbric Su	rface (F	13) (LRR	P, T, U)			ogy must be present,
Sandy	Mucky Mine	eral (	S1) (LF	RR O, S)		Delta Ochr	ic (F17)	(MLRA 1	51)		unless disturbe	ed or problematic.
Sandy	Gleyed Mat	trix (S	54)		W-179	Reduced V	/ertic (F	18) (MLR	A 150A, 1	50B)		
( Sandy	Redox (S5)	Ž.			1.	Piedmont I	Floodpla	ain Soils (I	F19) (MLR	A 149A)		
-	d Matrix (S				100		****				49A, 153C, 153D)	
_	urface (S7)		RPS	T 11)					( / (		,,,	
Restrictive Type: Depth (in	N/A nches): N	obse N/A	erved):				-		Hydric s	oil prese	ent? Yes _	X No
			8									
								¥				

Project/Site: Harbor Island		Cit	ty/County: Nuece Count	у	Sampling Date:	March 19, 2019
Applicant/Owner: POCCA				State: TX	Sampling Point:	
Investigator(s): Ashley Bogrand, Orla	ndo Recio	Sec	ction, Township, Range:	Access to the second se	_	
Landform (hillslope, terrace, etc.): Prair		Lo	cal relief (concave, conv	ex, none): Conca	ave Slope	(%): 0-1
Subregion (LRR or MLRA): LRR T		Lat: 27.846574	00 L	ong: -97.065198		m: NAD83
Soil Map Unit Name: Mustang Fine San	d, 0 to 1 perce	ent		NW	/I classification:	
Are climatic / hydrologic conditions on the			ear? Yes X	No (If n	o, explain in Remark	s.)
Are vegetation, Soil, or	Hydrology	significantly d	isturbed? Are "ne	ormal circumstan	ices" present? Ye	es X No
			lematic? (If nee			
SUMMARY OF FINDINGS – Atta						
Hydrophytic Vegetation Present?	Yes X	No	Is the Sampled Area	within a		
Hydric Soil Present?	Yes X	No	Wetland?		sNo	X
Wetland Hydrology Present?	Yes	No X	Subsective and the subsection of the subsection			
Remarks:						
HYDROLOGY						
Wetland Hydrology Indicators:				Seconda	ry Indicators (minimu	ım of two required)
Primary Indicators (minimum of one is r	equired; check	all that apply)	Page 22 a 1997	Surfa	ace Soil Cracks (B6)	
Surface Water (A1)		Aquatic Fauna	Maria de Maria de Caracteria d	Spar	rsely Vegetated Cond	cave Surface (B8)
High Water Table (A2)	-	Marl Deposits (	B15) (LRR U)	Drain	nage Patterns (B10)	
Saturation (A3)		Hydrogen Sulfic	de Odor (C1)	Mos	s Trim Lines (B16)	
Water Marks (B1)	_		spheres on Living Roots	(C3) _ Dry-	Season Water Table	(C2)
<ul> <li>Sediment Deposits (B2)</li> </ul>			duced Iron (C4)		fish Burrows (C8)	
Drift Deposits (B3)	-		duction in Tilled Soils (Ce		ration Visible on Aer	
Algal Mat or Crust (B4)	-	Thin Muck Surf			morphic Position (D2	2)
Iron Deposits (B5)	_	Other (Explain i	n Remarks)		llow Aquitard (D3)	
Inundation Visible on Aerial Image	y (B7)				-Neutral Test (D5)	
Water-Stained Leaves (B9)				Spha	agnum moss (D8) (L	RR T, U)
Field Observations:	Applica Hada					
		_ Depth (inches				
		_ Depth (inches				
Saturation present? Yes (includes capillary fringe)	No_X	_ Depth (inches	Wetla	ind Hydrology P	resent? Yes	NoX
Describe Recorded Data (stream gauge	, monitoring we	ell, aerial photos,	previous inspections), if	available:		
Remarks:						

#### VEGETATION (Four Strata) - Use scientific names of plants

	,	fic names of pla	11113			The second secon	8	
		Absolute	Dominant	Indicator	Dominance Test	worksheet:		
	Size:)	% Cover	Species?	Status	Number of Domin			
1 None					That Are OBL, FA	CW, or FAC:	2	_ (A)
2					Total Number of I	Dominant		
3					Species Across a	Il Strata:	2	_ (B)
4					Percent of Domin	ant Species that		
5					are OBL, FACW,	or FAC:	100.00%	_ (A/I
6								
7					Prevalence Index	x worksheet		
8 8					Total % Cov	ver of: Mult	tiply by:	_
		0	= Total Cover		OBL species	25 x 1 =	25	_
	50% of total cover:	0 20%	of total cover.	0	FACW species _	80 x 2 =	160	_
Sapliing/Shrub Stratum	(Plot Size: <b>15'</b>	)			FAC species	0 x 3 =	0	_
1 None					FACU species	4 x 4 =	16	
					UPL species	0 x5=	0	
					Column totals	109 (A)	201	(B)
					_			<del>-</del> 000 1
					Prevaler	nce Index = B/A =	1.84	
						etation Indicators:		
7					1 -Rapid Test	for Hydrophytic Veg	etation	
					X 2 - Dominano			
		0	= Total Cover		X 3 - Prevalence			
	50% of total cover:		of total cover:			lydrophytic Vegetati	on <sup>1</sup> (Explain)	
Herh Stratum (Diet S	Size:)		0, 1010, 0010,			,, ap, a	S. ()	
The second secon		20	V	FACIN	11-15-1-1-1		h doed a see see s	a4 b a
			· <del>_ Y</del> ·	FACW		ric soil and wetland li sturbed or problema		st be
2 Eleocharis tube	rcuiosa	25	•					
0 1/1-1				OBL	1			_
		4	N	FACU	Definitions of Fo	ur Vegetation Strat	ta:	) or
4		4	N	FACU	Definitions of Fo		ta: 3 in. (7.6 cm)	
5		4	N	FACU	Definitions of Fo	ur Vegetation Strat	ta: 3 in. (7.6 cm)	
5		4	N	FACU	Definitions of Fo Tree - Woody plat more in diameter height.	ur Vegetation Strat nts, excluding vines at breast height (DB	ta: 3 in. (7.6 cm) 3H), regardles	s of
4		4	N	FACU	Definitions of Fo Tree - Woody plat more in diameter height. Sapling/shrub - V	ur Vegetation Strat	ta: 3 in. (7.6 cm) iH), regardles ding vines, les	s of
4		4	N	FACU	Definitions of Fo Tree - Woody plat more in diameter height. Sapling/shrub - V 3 in. DBH and gre	ur Vegetation Stratents, excluding vines at breast height (DB Woody plants, excludater than 3.28 ft (1 and 1.28 ft)	ta: 3 in. (7.6 cm) H), regardles ding vines, les m) tall.	s of
4		4	N	FACU	Definitions of Fo Tree - Woody plan more in diameter height. Sapling/shrub - V 3 in. DBH and gre Herb - All herbace	ur Vegetation Stratums, excluding vines at breast height (DB Woody plants, excludater than 3.28 ft (1 areas)	ta: 3 in. (7.6 cm) 3H), regardles ding vines, les m) tall. ants, regardle	s of
4		4	N	FACU	Definitions of Fo Tree - Woody plan more in diameter height. Sapling/shrub - V 3 in. DBH and gre Herb - All herbace	ur Vegetation Stratents, excluding vines at breast height (DB Woody plants, excludater than 3.28 ft (1 and 1.28 ft)	ta: 3 in. (7.6 cm) 3H), regardles ding vines, les m) tall. ants, regardle	s of
4 5 6 7 8 9 110		4	N	FACU	Definitions of Fo Tree - Woody plat more in diameter height.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody p	ur Vegetation Stratums, excluding vines at breast height (DB Woody plants, excludater than 3.28 ft (1 areas)	ta: 3 in. (7.6 cm) 8H), regardles ding vines, les m) tall. ants, regardle ft tall.	s of ss tha
4		4	N	FACU	Definitions of Fo Tree - Woody plat more in diameter height.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody p	ur Vegetation Stratents, excluding vines at breast height (DB Woody plants, excluding that the same strates of the same strategy of the same strates of the same strategy of	ta: 3 in. (7.6 cm) 8H), regardles ding vines, les m) tall. ants, regardle ft tall.	s of ss tha
4		4	N	FACU	Definitions of Fo Tree - Woody plat more in diameter height.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody p	ur Vegetation Stratents, excluding vines at breast height (DB Woody plants, excluding that the same strates of the same strategy of the same strates of the same strategy of	ta: 3 in. (7.6 cm) 8H), regardles ding vines, les m) tall. ants, regardle ft tall.	s of ss tha
4		109	N	FACU	Definitions of Fo Tree - Woody plat more in diameter height.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody p	ur Vegetation Stratents, excluding vines at breast height (DB Woody plants, excluding that the same strates of the same strategy of the same strates of the same strategy of	ta: 3 in. (7.6 cm) 8H), regardles ding vines, les m) tall. ants, regardle ft tall.	s of ss tha
4		109 54.5 20%	N = Total Cover	FACU	Definitions of Fo Tree - Woody plat more in diameter height.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody p	ur Vegetation Stratents, excluding vines at breast height (DB Woody plants, excluding that the same strates of the same strategy of the same strates of the same strategy of	ta: 3 in. (7.6 cm) 8H), regardles ding vines, les m) tall. ants, regardle ft tall.	s of ss tha
4	50% of total cover:	109	N = Total Cover	FACU	Definitions of Fo Tree - Woody plat more in diameter height.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody p	ur Vegetation Stratents, excluding vines at breast height (DB Woody plants, excluding that the same strates of the same strategy of the same strates of the same strategy of	ta: 3 in. (7.6 cm) 8H), regardles ding vines, les m) tall. ants, regardle ft tall.	s of ss tha
4	50% of total cover:(Plot Size:30'		= Total Cover	FACU	Definitions of Fo Tree - Woody plat more in diameter height.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody p	ur Vegetation Stratents, excluding vines at breast height (DB Woody plants, excluding that the same strates of the same strategy of the same strates of the same strategy of	ta: 3 in. (7.6 cm) 8H), regardles ding vines, les m) tall. ants, regardle ft tall.	s of ss tha
4	50% of total cover:(Plot Size:30'		= Total Cover	FACU	Definitions of Fo Tree - Woody plat more in diameter height.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody p	ur Vegetation Stratents, excluding vines at breast height (DB Woody plants, excluding that the same strates of the same strategy of the same strates of the same strategy of	ta: 3 in. (7.6 cm) 8H), regardles ding vines, les m) tall. ants, regardle ft tall.	s of ss tha
4	50% of total cover:	109 54.5 20%	= Total Cover	FACU	Definitions of Fo Tree - Woody plat more in diameter height.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody p	ur Vegetation Stratents, excluding vines at breast height (DB Woody plants, excluding that the same strates of the same strategy of the same strates of the same strategy of	ta: 3 in. (7.6 cm) 8H), regardles ding vines, les m) tall. ants, regardle ft tall.	s of ss tha
4	50% of total cover:(Plot Size:30'	109 54.5 20%	= Total Cover	FACU	Definitions of Fo Tree - Woody plat more in diameter height.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody p	ur Vegetation Stratents, excluding vines at breast height (DB Woody plants, excluding that the same strates of the same strategy of the same strates of the same strategy of	ta: 3 in. (7.6 cm) 8H), regardles ding vines, les m) tall. ants, regardle ft tall.	s of ss tha
4	50% of total cover: { (Plot Size:		= Total Cover:	21.8	Definitions of Fo Tree - Woody plat more in diameter height.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody p Woody vines - Al height.  Hydrophytic	ur Vegetation Stratents, excluding vines at breast height (DB Woody plants, excluding that the same strates of the same strategy of the same strates of the same strategy of	ta: 3 in. (7.6 cm) 8H), regardles ding vines, les m) tall. ants, regardle ft tall.	s of ss tha
4	50% of total cover: { (Plot Size:		= Total Cover	21.8	Definitions of Fo Tree - Woody plat more in diameter height.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody p Woody vines - Al height.	ur Vegetation Stratents, excluding vines at breast height (DB Woody plants, excluding that the same strates of the same strategy of the same strates of the same strategy of	ta: 3 in. (7.6 cm) H), regardles ding vines, les m) tall. ants, regardle ft tall. er than 3.28 ft	s of ss tha

IIO			
	-	-	
	•	<i>r</i> 1	

offic Des	cription:	(Des Mat		o tne de	ptn neede	α το		nent the x Featu		r or conn	rm the ac	sence of indicate	ors.)		
ches)	Color	-		%	Color	(moi	-	%	Type <sup>1</sup>	Loc2		Texture		Ren	narks
0-2	10YR	-	/ 2	99	7.5YR		/ 8	1	C	PL	Loamy	Sand			
2-6	10YR		1 2	99	7.5YR	5	/ 8	1	С	PL	Loamy				
6-7	Gley 1	_	/ 10Y	90	7.5YR	4	/ 6	10	С	PL	Sandy	Clay			
7-16	10YR	2	/ 2	100						_	Loamy	Sand			
dric Soil Histisol Histis E Black H Hydroge Stratifier Organic 5 cm Mt Muck Pr 1 cm Mt Deplete Thick Di Coast P Sandy M Sandy G	Indicator	S: (A 2) (A4) (A5) (6) (LI (A7) (8) (LI (A7) (8) (LI (A7) (8) (A7) (9) (A7) (9) (A7) (9) (9) (9) (9) (9) (9) (9) (9) (9) (9	RR P, T 7) (LRR RR U) 7, T) uface ( 2) 16) (ML S1) (LR	T, U) P, T, U A11) RA 150	_ _ _ _	Poly Thir Loa Loa Dep Red Dep Red Mar Dep Iron Uml Delt Red	s other value n Dark my Mu my Gle bleted I flox Dar bleted I flox De leted (F10) bleted (G-Mang bric Su ta Och fluced I	Below S Surface icky Min eyed Ma Matrix (F rk Surface Dark Sur pression (LRR U Dochric (F anese M irface (F ric (F17) Vertic (F	oted.) Surface (Si (S9) (LRF eral (F1) ( trix (F2) (3) oe (F6) face (F7) os (F8) () F11) (MLR fasses (F1 13) (LRR (MLRA 1 18) (MLRA ain Soils (F	8) (LRR S R, S, T, U) LRR O) 12) (LRR P, T, U) 51) A 150A, 1	, T, U) O, P, T) 50B) &A 149A)	The state of the s	oblemati 9) (LRR 10) (LRR 10) (LRR 10) (bdplain S right Loan ) laterial (T Dark Sur n in Rema	ic Hydric O) S S) coutside In coils (F19) my Soils ( F2) face (TF1 arks) rtic vegeta st be prese	Soils <sup>3</sup> :  MLRA 150A,B, (LRR P, S, T) F20)  2)
strictive	Layer (if N/A			r, u)						Hydric s	oil prese	nt? Yes	×	No	
marks:															
															*

Project/Site: Harbor Island		City/	County: Nuece	County	Samplir	ng Date:	March 19, 2019
Applicant/Owner: POCCA				State: TX		ng Point:	9
Investigator(s): Ashley Bogran	d, Orlando Recio	Section	on, Township, R	ange: None			
Landform (hillslope, terrace, etc.):		Loca	I relief (concave	convex, none):	Concave	Slope	(%): 0-1
Subregion (LRR or MLRA): LRR		 27.84705400		Long: -97.0	CANAGE OF THE STATE OF THE STAT		n: NAD83
Soil Map Unit Name: Mustang F					NWI classifica	1000	
Are climatic / hydrologic condition		ne of the yea	r? Yes	X No			
	, or Hydrologysig						
	, or Hydrology nat						
SUMMARY OF FINDINGS			200 27 20				
Hydrophytic Vegetation Present	? Yes No _	<u>x</u>	Is the Sampled	Area within a			
Hydric Soil Present?	Yes X No		Wetland?	Area within a	Yes	No	X
Wetland Hydrology Present?	Yes No	x			3000		
Remarks:							
HYDROLOGY							-
Wetland Hydrology Indicators	•			Se	condary Indicate	ors (minimur	m of two required)
Primary Indicators (minimum of	one is required; check all that	apply)			Surface Soil C	racks (B6)	
Surface Water (A1)	Aqua	tic Fauna (B	13)	V	Sparsely Vege	tated Conc	ave Surface (B8)
High Water Table (A2)	Marl	Deposits (B1	5) (LRR U)	_	Drainage Patte	ems (B10)	
Saturation (A3)	Hydr	ogen Sulfide	Odor (C1)	_	Moss Trim Lin	es (B16)	
Water Marks (B1)	Oxidi	zed Rhizospl	heres on Living I	Roots (C3)	Dry-Season W	later Table	(C2)
Sediment Deposits (B2)	Pres	ence of Redu	iced Iron (C4)		Crayfish Burro	ws (C8)	
Drift Deposits (B3)	Rece	nt Iron Redu	ction in Tilled Sc	ils (C6)	Saturation Vis	ible on Aeria	al Imagery (C9)
Algal Mat or Crust (B4)	Thin	Muck Surfac	e (C7)	_	Geomorphic P	osition (D2)	
Iron Deposits (B5)	Othe	r (Explain in I	Remarks)	-	Shallow Aquita	ard (D3)	
Inundation Visible on Aerial	Imagery (B7)			T-100	FAC-Neutral T	est (D5)	
Water-Stained Leaves (B9)					Sphagnum mo	oss (D8) (LF	RR T, U)
Field Observations:	Januari Para						
Surface water present?	Yes No_X Dep	oth (inches):					
Water table present?	Yes No X Dep	oth (inches):					
Saturation present? (includes capillary fringe)	Yes No_X Dep			Wetland Hydro	logy Present?	Yes	NoX
Describe Recorded Data (stream	n gauge, monitoring well, aeri	al photos, pr	evious inspectio	ns), if available:			
Remarks:							
1							

-	Status (Slat Single Coll.)	Absolute	Dominant	Indicator	Dominance Test worksheet:
	Stratum (Plot Size: 30' )	% Cover	Species?	Status	Number of Dominant Species
1 -					That Are OBL, FACW, or FAC: 1 (A)
2 _					Total Number of Dominant
					Species Across all Strata: 2 (B)
4 -					Percent of Dominant Species that
5 _					are OBL, FACW, or FAC: 50.00% (A/
6 _					Prevalence Index worksheet
7 -					
8 _					Total % Cover of: Multiply by:
		0	= Total Cover		OBL species
	50% of total cover: 0	20%	of total cover:	0	FACW species x 2 = 40
-971	ing/Shrub Stratum (Plot Size: 15' )				FAC species 40 x3 = 120
1 _	None				FACU species x 4 = 440
2 _					UPL species 5 x 5 = 25 (2)
					Column totals(A)(B)
4 -					Boundary July - BW - 0.57
<sup>5</sup> -					Prevalence Index = B/A = 3.57  Hydrophytic Vegetation Indicators:
<sup>6</sup> –	**				D 8 950 (25)
7_					1 -Rapid Test for Hydrophytic Vegetation
8 -					2 - Dominance Test is >50%
	SESSIONES NOS POR	0	= Total Cove		3 - Prevalence Index is ≤3.0 <sup>1</sup>
	50% of total cover: 0	20%	of total cover:	0	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
	Stratum (Plot Size: 5' )				
1 -	Cynodon dactylon	0.000	<u> </u>	FACU	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2 _	Andropogon gerardii	40	<u> </u>	FAC	Definitions of Four Vegetation Strata:
3 -	Andropogon glomeratus	20	N	FACW	Tree - Woody plants, excluding vines 3 in. (7.6 cm) or
4 _	Anagallis arvensis	20	N	FACU	more in diameter at breast height (DBH), regardless of
5 -	Taraxacum officinale	10	<u>N</u>	FACU	height.
6 <b>-</b>	Linum berlandieri	5	N	UPL	Sapling/shrub - Woody plants, excluding vines, less the
7 _					3 in. DBH and greater than 3.28 ft (1 m) tall.
B _					
9 _					Herb - All herbaceous (non-woody) plants, regardless o size, and woody plants less than 3.28 ft tall.
0_					size, and woody plants loss than 5.25 it tall.
1_					Woody vines - All woody vines greater than 3.28 ft in
2_	(000				height.
			= Total Cover		
	50% of total cover: <b>87.5</b>	20%	of total cover:	35	
Voo	dy Vine Stratum (Plot Size: 30')				
1 _	None				
2 _					
3 _					
4					
_					Hydrophytic
5 _		0	= Total Cover		vegetation
5 _					
5 _	50% of total cover: 0	20%	of total cover:	0	present? Yes No X

Sampling Point:

SOIL										Sampling	Point: 9
Profile De	scription:	(Describe t	to the de	pth needs	d to docum	nent the	indicato	r or confi	irm the a	absence of indicato	rs.)
Depth	oription.	Matrix	to the de	pui noous		x Featur					,
(inches)	Color	(moist)	%	Color	(moist)	%	Type <sup>1</sup>	Loc2		Texture	Remarks
0-6	10YR	4/2	98	7.5YR	5 / 8	2	С	PL	Loam	ny Sand	
6-7	Gley 2	6 / 8	95	5YR	4 / 6	5	С	PL	Clay	Loam	
7-16	10YR	4/2	98	7.5YR	5 / 8	2	C	PL		ny Sand	
	10111					_					
		<del></del>		_							
Type: C=Co	ncentration	D=Depletion	on RM=F	Reduced N	Matrix CS=0	Covered	or Coate	Sand Gr	ains.	<sup>2</sup> Location: PL=Pore	Lining M=Matrix.
110		rs: (Applica	Validation and	description and the second	Cherry C. C. C. Constant	eronal Billion	dissipation of the last of the			The second secon	oblematic Hydric Soils <sup>3</sup> :
V21000000000000000000000000000000000000		s. (Applice	ible to al	i Lixixo, ui				a	- 10		
Histisol				_	Polyvalue					1 cm Muck (A9	
Histic E	pipedon (A	12)		_	Thin Dark	Surface	(S9) (LRI	R, S, T, U)	)	2 cm Muck (A1	0) (LRR S)
Black H	listic (A3)				Loamy Mu	cky Min	eral (F1) (	LRR O)			c (F18) (outside MLRA 150A,B)
Hydrog	en Sulfide	(A4)		X	Loamy Gle	eyed Ma	trix (F2)			Piedmont Floo	dplain Soils (F19) (LRR P, S, T)
Stratifie	d Layers (	A5)		200 700	Depleted N	Matrix (F	3)			Anomalous Bri	ght Loamy Soils (F20)
Organio	Bodies (A	6) (LRR P,	T, U)		Redox Dar	k Surfac	ce (F6)			(MLRA 153B)	
_		ral (A7) (LRF	Harley.	, –	Depleted [	Dark Sur	face (F7)			Red Parent Ma	aterial (TF2)
		(8) (LRR U)		_	Redox Dep	oression	s (F8)			Very Shallow D	Dark Surface (TF12)
	uck (A9) (L			_	Marl (F10)					Other (Explain	
		장막일시민(1941), 1974	(444)	_		E		A 454)		Other (Explain	in Keniaka)
		ark Suface (	(A11)	-	Depleted (				0 0 7	120	
n <del>a na</del> Mahanadak	ark Surfac	The same of the sa			Iron-Mang			1818	O, P, 1)		ydrophytic vegetation and
		ox (A16) <b>(M</b> l		A)	Umbric Su		militian -				ogy must be present,
Sandy I	Mucky Mine	eral (S1) (LF	RR O, S)		Delta Ochr	ric (F17)	(MLRA 1	51)		unless disturbe	ed or problematic.
X Sandy	Gleyed Ma	trix (S4)		_	Reduced \	/ertic (F	18) (MLR	A 150A, 1	50B)		
X Sandy	Redox (S5)	)			Piedmont	Floodpla	ain Soils (I	F19) (MLF	RA 149A	)	
Strippe	d Matrix (S	6)			Anomalous	s Bright	Loamy So	oils (F20)	(MLRA 1	49A, 153C, 153D)	
Dark St	urface (S7)	(LRR P, S,	T, U)	_							
		observed):									
Type:	N/A	02001100).									
Depth (in		N/A				-		Hydric s	oil pres	ent? Yes	X No
Remarks:											

Project/Site: Harbor Island			City	/County: Nuece	County		Sampling Date:	March 19, 2019
Applicant/Owner: POCCA				***************************************	State:	TX	Sampling Point:	10
Investigator(s): Ashley Bogrand, O	rlando Recio		Sect	ion, Township, F	Range: None			
Landform (hillslope, terrace, etc.): Pr.	airie		Loca	al relief (concave	e, convex, nor	ne): None	Slope	e (%): <b>0</b>
Subregion (LRR or MLRA): LRR T		Lat: 27.	9476550	0	Long: -9	97.066561	Datu	m: NAD83
Soil Map Unit Name: Mustang Fine S	and, 0 to 1 perce	ent					classification:	3
Are climatic / hydrologic conditions on	the site typical for	this time	of the ye	ar? Yes _	X No	(If no,	explain in Remark	s.)
Are vegetation, Soil,	or Hydrology	signifi	cantly dis	turbed?	Are "normal o	circumstance	es" present? Ye	s X No
Are vegetation, Soil,								
SUMMARY OF FINDINGS - A	ttach site mar	showi	ng san	npling point	locations,	transects	s, important fe	atures, etc.
Hydrophytic Vegetation Present?	Yes X	No		Is the Sample	d Area within	2		
Hydric Soil Present?	Yes X	No		Wetland?	a Area widiiii		No No	X
Wetland Hydrology Present?	Yes	No	x			, mar.		
Remarks:								
HYDROLOGY			cont.					
Wetland Hydrology Indicators:						Secondary	Indicators (minimu	ım of two required)
Primary Indicators (minimum of one i	s required; check	all that ap	oply)			Surfac	e Soil Cracks (B6)	
Surface Water (A1)	_	Aquatic	Fauna (E	313)		Spars	ely Vegetated Cond	cave Surface (B8)
High Water Table (A2)	_	Marl De	posits (B	15) (LRR U)		Draina	age Patterns (B10)	
Saturation (A3)	n	Hydroge	en Sulfide	Odor (C1)		Moss	Trim Lines (B16)	
Water Marks (B1)	_	Oxidized	d Rhizosp	heres on Living	Roots (C3)	Dry-Se	eason Water Table	(C2)
Sediment Deposits (B2)		Presenc	ce of Red	uced Iron (C4)		Crayfi:	sh Burrows (C8)	
Drift Deposits (B3)	_	Recent	Iron Red	uction in Tilled S	oils (C6)	Satura	ation Visible on Aer	ial Imagery (C9)
Algal Mat or Crust (B4)	-	Thin Mu	ick Surfac	ce (C7)		Geom	orphic Position (D2	2)
Iron Deposits (B5)		Other (E	Explain in	Remarks)		Shallo	w Aquitard (D3)	
Inundation Visible on Aerial Imag	jery (B7)					FAC-N	Neutral Test (D5)	
Water-Stained Leaves (B9)						Sphag	num moss (D8) (L	RR T, U)
Field Observations:						<del>\</del>		
Surface water present? Y	es No_X	Depth	(inches):					
Water table present? Y	es No_X	Depth	(inches):					
Saturation present? Y	es No_X	Depth	(inches):		Wetland Hyd	drology Pre	esent? Yes	NoX
(includes capillary fringe)  Describe Recorded Data (stream gau	ide monitoring w	ell serial	nhotos n	revious inspection	ons) if availah	ole:		
Describe Necorded Data (Stream gat	ige, monitoring we	on, acriar j	priotos, p	revious irrspection	ons), ii avallac	ne.		
Remarks:				-				
ĺ)								

ETATION (Four Strata) - Use scientific r	names of pla	nis		Sampling Point:	
	Absolute	Dominant	Indicator	Dominance Test worksheet:	
ree Stratum (Plot Size: 30')	% Cover	Species?	Status	Number of Dominant Species	
None				That Are OBL, FACW, or FAC:	1 (/
2				Total Number of Dominant	
				Species Across all Strata:	(E
		W		Percent of Dominant Species that	
					100.00% (
			de comp		
			·	Prevalence Index worksheet	
		(2000)		Total % Cover of: Multip	ly by:
	0	= Total Cove	er	OBL species 70 x 1 =	70
50% of total cover: 0	20%	of total cover:		FACW species 0 x2 =	
ppliing/Shrub Stratum (Plot Size: 15'		***************************************		FAC species 0 x 3 =	
None				FACU species 0 x4=	
				UPL species 4 x 5 =	26.00
				Column totals 74 (A)	
		500 BRANCE (2)			(-
8				Prevalence Index = B/A =	1.22
				Hydrophytic Vegetation Indicators:	1 , 50 50
				1 -Rapid Test for Hydrophytic Vege	tation
				X 2 - Dominance Test is >50%	tation
and the same of th				X 3 - Prevalence Index is ≤3.0 <sup>1</sup>	
	0	= Total Cove	er		
<del> </del>		of total cover:		Problematic Hydrophytic Vegetation  1 Indicators of hydric soil and wetland hy	
erb Stratum (Plot Size: 5' )  Eleocharis tuberculosa  Schoenoplectus americanus  Sisyrinchium langloisii	60 10 4	Y N N	OBL OBL UPL	Problematic Hydrophytic Vegetation  1 Indicators of hydric soil and wetland hy present, unless disturbed or problematic Definitions of Four Vegetation Strata  Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH)	rdrology must b c. : in. (7.6 cm) or
Eleocharis tuberculosa Schoenoplectus americanus Sisyrinchium langloisii	60 10 4	N N	OBL OBL UPL	<sup>1</sup> Indicators of hydric soil and wetland hy present, unless disturbed or problemation.  Definitions of Four Vegetation Strata Tree - Woody plants, excluding vines 3	rdrology must b c. : in. (7.6 cm) or
Eleocharis tuberculosa Schoenoplectus americanus Sisyrinchium langloisii	60 10 4	N N	OBL OBL UPL	¹Indicators of hydric soil and wetland hy present, unless disturbed or problemation.  Definitions of Four Vegetation Strata  Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH height.	rdrology must b c. : in. (7.6 cm) or ), regardless of
erb Stratum (Plot Size: 5' )  Eleocharis tuberculosa  Schoenoplectus americanus  Sisyrinchium langloisii	60 10 4	N N	OBL OBL UPL	<sup>1</sup> Indicators of hydric soil and wetland hy present, unless disturbed or problemation.  Definitions of Four Vegetation Strata  Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH	rdrology must b c. : in. (7.6 cm) or ), regardless of
Eleocharis tuberculosa Schoenoplectus americanus Sisyrinchium langloisii	60 10 4	N N	OBL OBL UPL	¹Indicators of hydric soil and wetland hy present, unless disturbed or problematic Definitions of Four Vegetation Strata Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH height.  Sapling/shrub - Woody plants, excluding 3 in. DBH and greater than 3.28 ft (1 m)	rdrology must b c. : in. (7.6 cm) or ), regardless of ng vines, less th
Eleocharis tuberculosa  Schoenoplectus americanus  Sisyrinchium langloisii	60 10 4	N N	OBL OBL UPL	¹Indicators of hydric soil and wetland hy present, unless disturbed or problematic Definitions of Four Vegetation Strata Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH height.  Sapling/shrub - Woody plants, excluding 3 in. DBH and greater than 3.28 ft (1 mg) Herb - All herbaceous (non-woody) plants	rdrology must b c. : in. (7.6 cm) or ), regardless of ng vines, less ti ) tall.
Eleocharis tuberculosa Schoenoplectus americanus Sisyrinchium langloisii	60 10 4	N N	OBL OBL UPL	¹Indicators of hydric soil and wetland hy present, unless disturbed or problematic Definitions of Four Vegetation Strata Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH height.  Sapling/shrub - Woody plants, excluding 3 in. DBH and greater than 3.28 ft (1 m) Herb - All herbaceous (non-woody) plants ize, and woody plants less than 3.28 ft	rdrology must b c. : in. (7.6 cm) or ), regardless of ng vines, less ti ) tall. nts, regardless t tall.
Eleocharis tuberculosa  Schoenoplectus americanus  Sisyrinchium langloisii	60 10 4	N N	OBL OBL UPL	¹Indicators of hydric soil and wetland hy present, unless disturbed or problematic Definitions of Four Vegetation Strata Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH height.  Sapling/shrub - Woody plants, excluding 3 in. DBH and greater than 3.28 ft (1 mg) Herb - All herbaceous (non-woody) plants	rdrology must b c. : in. (7.6 cm) or ), regardless of ng vines, less ti ) tall. nts, regardless t tall.
Eleocharis tuberculosa  Schoenoplectus americanus  Sisyrinchium langloisii	60 10 4	N N	OBL OBL UPL	¹Indicators of hydric soil and wetland hy present, unless disturbed or problematic Definitions of Four Vegetation Strata Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH height.  Sapling/shrub - Woody plants, excluding 3 in. DBH and greater than 3.28 ft (1 m) Herb - All herbaceous (non-woody) plantsize, and woody plants less than 3.28 ft Woody vines - All woody vines greater	rdrology must b c. : in. (7.6 cm) or ), regardless of ng vines, less ti ) tall. nts, regardless t tall.
Eleocharis tuberculosa  Schoenoplectus americanus  Sisyrinchium langloisii	60 10 4	N N	OBL OBL UPL	¹Indicators of hydric soil and wetland hy present, unless disturbed or problematic Definitions of Four Vegetation Strata Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH height.  Sapling/shrub - Woody plants, excluding 3 in. DBH and greater than 3.28 ft (1 m) Herb - All herbaceous (non-woody) plantsize, and woody plants less than 3.28 ft Woody vines - All woody vines greater	rdrology must b c. : in. (7.6 cm) or ), regardless of ng vines, less ti ) tall. nts, regardless t tall.
Eleocharis tuberculosa Schoenoplectus americanus Sisyrinchium langloisii	60 10 4	N N	OBL OBL UPL	¹Indicators of hydric soil and wetland hy present, unless disturbed or problematic Definitions of Four Vegetation Strata Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH height.  Sapling/shrub - Woody plants, excluding 3 in. DBH and greater than 3.28 ft (1 m) Herb - All herbaceous (non-woody) plantsize, and woody plants less than 3.28 ft Woody vines - All woody vines greater	rdrology must b c. : in. (7.6 cm) or ), regardless of ng vines, less ti ) tall. nts, regardless t tall.
Eleocharis tuberculosa Schoenoplectus americanus Sisyrinchium langloisii  50% of total cover: 37  coody Vine Stratum (Plot Size: 30' )	60 10 4	N N	OBL OBL UPL	¹Indicators of hydric soil and wetland hy present, unless disturbed or problematic Definitions of Four Vegetation Strata Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH height.  Sapling/shrub - Woody plants, excluding 3 in. DBH and greater than 3.28 ft (1 m) Herb - All herbaceous (non-woody) plantsize, and woody plants less than 3.28 ft Woody vines - All woody vines greater	rdrology must b c. : in. (7.6 cm) or ), regardless of ng vines, less ti ) tall. nts, regardless t tall.
Eleocharis tuberculosa Schoenoplectus americanus Sisyrinchium langloisii  50% of total cover: 37 None  Plot Size: 30' )	74 20%	N N	OBL OBL UPL	¹Indicators of hydric soil and wetland hy present, unless disturbed or problematic Definitions of Four Vegetation Strata Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH height.  Sapling/shrub - Woody plants, excluding 3 in. DBH and greater than 3.28 ft (1 m) Herb - All herbaceous (non-woody) plantsize, and woody plants less than 3.28 ft Woody vines - All woody vines greater	rdrology must b c. : in. (7.6 cm) or ), regardless of ng vines, less ti ) tall. nts, regardless t tall.
Eleocharis tuberculosa Schoenoplectus americanus Sisyrinchium langloisii  50% of total cover: 37 None	74 20%	N N	OBL OBL UPL	¹Indicators of hydric soil and wetland hy present, unless disturbed or problematic Definitions of Four Vegetation Strata Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH height.  Sapling/shrub - Woody plants, excluding 3 in. DBH and greater than 3.28 ft (1 m) Herb - All herbaceous (non-woody) plantsize, and woody plants less than 3.28 ft Woody vines - All woody vines greater	rdrology must b c. : in. (7.6 cm) or ), regardless of ng vines, less ti ) tall. nts, regardless t tall.
Eleocharis tuberculosa Schoenoplectus americanus Sisyrinchium langloisii  50% of total cover: 37 None	74 20%	N N	OBL OBL UPL	¹Indicators of hydric soil and wetland hy present, unless disturbed or problematic Definitions of Four Vegetation Strata Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH height.  Sapling/shrub - Woody plants, excluding 3 in. DBH and greater than 3.28 ft (1 m) Herb - All herbaceous (non-woody) plantsize, and woody plants less than 3.28 ft Woody vines - All woody vines greater	rdrology must b c. : in. (7.6 cm) or ), regardless of ng vines, less ti ) tall. nts, regardless t tall.
Eleocharis tuberculosa Schoenoplectus americanus Sisyrinchium langloisii  50 50 60 61 62 63 64 64 65 66 67 67 68 68 68 68 68 68 68 68 68 68 68 68 68	74 20%	N N	OBL OBL UPL	¹Indicators of hydric soil and wetland hy present, unless disturbed or problematic Definitions of Four Vegetation Strata Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH height.  Sapling/shrub - Woody plants, excluding 3 in. DBH and greater than 3.28 ft (1 m) Herb - All herbaceous (non-woody) plantsize, and woody plants less than 3.28 ft Woody vines - All woody vines greater	rdrology must b c. : in. (7.6 cm) or ), regardless of ng vines, less ti ) tall. nts, regardless t tall.
Eleocharis tuberculosa   Schoenoplectus americanus   Sisyrinchium langloisii   Sisyrinchium la	74 20%	N N	OBL OBL UPL	¹Indicators of hydric soil and wetland hy present, unless disturbed or problematic Definitions of Four Vegetation Strata Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH height.  Sapling/shrub - Woody plants, excluding 3 in. DBH and greater than 3.28 ft (1 m) Herb - All herbaceous (non-woody) plantsize, and woody plants less than 3.28 ft Woody vines - All woody vines greater height.	rdrology must b c. : in. (7.6 cm) or ), regardless of ng vines, less ti ) tall. nts, regardless t tall.
Stratum	74 20%	N N	OBL OBL UPL	<sup>1</sup> Indicators of hydric soil and wetland hy present, unless disturbed or problematic Definitions of Four Vegetation Strata Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH height.  Sapling/shrub - Woody plants, excluding 3 in. DBH and greater than 3.28 ft (1 m) Herb - All herbaceous (non-woody) plantsize, and woody plants less than 3.28 ft Woody vines - All woody vines greater height.	rdrology must b c. : in. (7.6 cm) or ), regardless of ng vines, less to ) tall. nts, regardless tall. than 3.28 ft in

Sampling	Point:	10

epth inches)	58-353- <del>8</del> 6168-34500 917	Mat		to the de	pui neede		x Featur		r or confi	rm the al	sence of indic	ators.)
	Color			%	Color	(moist)	%	Type <sup>1</sup>	Loc2		Texture	Remarks
0-1	10YR		/ 3	100							Sand	
1-2	2.5YR		/ 1	98	7.5YR	5 / 6	2	С	PL	Sandy	The barrers of the second	
2-10	10YR		/ 3	99	Gley 1	7 / 5	1		PL.	Sandy		Gley1 7/5G
10-16	10YR	1007000	/ 1	100	Oley I	7 7 3		<del>_</del>			/ Sand	Gley i 1/3G
10-10	TOTA	0	_	100						Loam	Joanu	
oe: C=Cor	ncentration	, D=0	Depletio	on, RM=I	Reduced N	Matrix, CS=C	overed	or Coated	Sand Gra	ains.	<sup>2</sup> Location: PL=F	Pore Lining, M=Matrix.
dric Soil	Indicator:	s: (A	pplica	ble to al	I LRRs, u	nless other	wise no	ted.)			Indicators for	Problematic Hydric Soils <sup>3</sup> :
Histisol	(A1)					Polyvalue I	Below S	urface (Sa	B) (LRR S	T, U)	1 cm Muck	(A9) (LRR O)
Histic Er	pipedon (A	2)			2.5	Thin Dark	Surface	(S9) (LRF	R, S, T, U)		2 cm Muck	(A10) (LRR S)
	istic (A3)	80				Loamy Mu						ertic (F18) (outside MLRA 150A,B
	en Sulfide (	(14				Loamy Gle	- 5				A	Floodplain Soils (F19) (LRR P, S, T)
					$\overline{}$	il						
	d Layers (A			T 110	<u>x</u>	Depleted N					Water Company of the	Bright Loamy Soils (F20)
	Bodies (A				_	Redox Dar					(MLRA 15	and Andrew man in a company
	ucky Minera	The state of	The second	RP, T, U		Depleted D						t Material (TF2)
Muck Pr	resence (A	8) (LI	RR U)			Redox Dep		.000 15			Very Shallo	ow Dark Surface (TF12)
1 cm Mu	uck (A9) (L	RR P	, T)		_	Marl (F10)	(LRR U)	)			Other (Exp	lain in Remarks)
Deplete	d Below Da	ark S	uface (	(A11)		Depleted C	chric (F	11) (MLR	A 151)		55 Size	
Thick D	ark Surface	(A1	2)			Iron-Manga	nese M	asses (F1	2) (LRR (	), P, T)	3Indicators	of hydrophytic vegetation and
	rairie Redo	. Harris	. 13	RA 150	A)	Umbric Su	face (F1	13) (LRR	P, T, U)	002 16 32		drology must be present,
	Mucky Mine	- Vicin			_	Delta Ochr						urbed or problematic.
	Sleyed Mat			0, 0,	_	Reduced V			a Barrer e a	(OB)		
		iix (O	4)		_				wasaninga Mana	un militarensen		
	Redox (S5)					Piedmont F						
	Matrix (S6		020000000	Larestates		Anomalous	Bright I	Loamy So	ilis (F20) (	MLRA 14	9A, 153C, 153I	))
110.000.000	rface (S7)	<b>V</b> aluation		T, U)								
actrictive	Layer (if o	bse	rved):									
					-				11	. 11		
Type:	N/A								Hydric s	oil prese	nt? Yes	SX No
		/A										
Type: Depth (in		I/A										
Type: Depth (in		I/A										
Type: Depth (in		I/A										
Type: Depth (in		I/A										
Type: Depth (in		I/A										
Type: Depth (in		I/A										
Type: Depth (in		I/A										
Type: Depth (in		I/A										
Type: Depth (in		I/A										
Type: Depth (in		I/A										
Type: Depth (in		I/A										
Type: Depth (in		I/A										
Type: Depth (in		I/A										
Type: Depth (in		I/A										
Type: Depth (in		I/A										
Type: Depth (in		I/A										
Type: Depth (in		I/A										
Type:		I/A										
Type: Depth (in		I/A										
Type: Depth (in		l/A										
Type: Depth (in		l/A										
Type: Depth (in		MA.										

Project/Site: Harbor Island			City/County: Nuece	County		Sampling Date:	March 19, 2019
Applicant/Owner: POCCA				State:	TX	Sampling Point:	11
Investigator(s): Ashley Bogra	and, Orlando Recio		Section, Township, f	Range: None			
Landform (hillslope, terrace, etc	.): Prairie		Local relief (concave	e, convex, nor	ne): None	Slope	(%): 0
Subregion (LRR or MLRA): LRR	≀ T	Lat: 27.8484	42800	Long: -9	97.067285	Datu	m: NAD83
Soil Map Unit Name: Mustang	Fine Sand, 0 to 1 perce	nt		_	NWI	classification:	
Are climatic / hydrologic condition	ons on the site typical for	this time of th	e year? Yes	X No	(If no	, explain in Remark	s.)
Are vegetation , Soil _	, or Hydrology	significantl	ly disturbed?	Are "normal of	circumstand	ces" present? Ye	s X No
	, or Hydrology						
		5000	10 10 10 10 10 10 10 10 10 10 10 10 10 1				
SUMMARY OF FINDING	5 – Attach site map	snowing	sampling point	iocations,	transect	s, important re	atures, etc.
Hydrophytic Vegetation Prese	nt? Van	No. V					
<ul> <li>Child Barris Bill Color Registro in contract to the process of contract registros.</li> <li>destination of the Color of the process of the</li></ul>			Is the Sample	d Area within	a		
Hydric Soil Present?	Yes X	No	_ Wetland?		Yes	No	X
Wetland Hydrology Present?	Yes	No X	_				
Remarks:					-		
SATISFACTOR CONTROL SATISFACTOR							*
HYDROLOGY							
Wetland Hydrology Indicator	rs:				Secondar	y Indicators (minimu	m of two required)
Primary Indicators (minimum o		all that apply)				ice Soil Cracks (B6)	
Surface Water (A1)		Aquatic Fau	160		Span	sely Vegetated Cond	cave Surface (B8)
High Water Table (A2)			ts (B15) (LRR U)			nage Patterns (B10)	ecula en transportation de la Perri de Carta de
Saturation (A3)	<del>27 - 2</del> 2		ulfide Odor (C1)		Moss	Trim Lines (B16)	
Water Marks (B1)	19.00	E NO CHENT	izospheres on Living	Roots (C3)		Season Water Table	(C2)
Sediment Deposits (B2)			Reduced Iron (C4)			fish Burrows (C8)	
Drift Deposits (B3)			Reduction in Tilled S	Soils (C6)		ration Visible on Aer	ial Imagery (C9)
Algal Mat or Crust (B4)	_	Thin Muck S			W. N. sussenses	norphic Position (D2	
Iron Deposits (B5)	_		ain in Remarks)		0.00000 70	ow Aquitard (D3)	,
Inundation Visible on Aeri	ial Imagery (B7)	- and (				Neutral Test (D5)	
Water-Stained Leaves (B	CO. C.					gnum moss (D8) (L	PRT III
	3)					igridiri moss (Do) (E	10(1,0)
Field Observations:	V N- V	Double Cont	h a a V				
Surface water present?	Yes No X			1			
Water table present?	Yes No X						NATION COMPANY
Saturation present? (includes capillary fringe)	Yes No_X	Depth (inc	hes):	Wetland Hy	drology Pr	esent? Yes	NoX
Describe Recorded Data (stre	am gauge, monitoring we	II. aerial phot	os, previous inspecti	ons), if availab	ole:		
,	3-31						
Remarks:							

ETATION (Four Strata) - Use scientific na	mes of pla	nts		S		_		
	Absolute	Dominant	Indicator	Dominance Test v	vorksheet:			
ree Stratum (Plot Size: 30')	% Cover	Species?	Status	Number of Domina				
1 None				That Are OBL, FAC	CW, or FAC	:	11	_ (A
2				Total Number of Do	ominant			
3				Species Across all	Strata:		2	_ (B
4				Percent of Dominar	nt Species t	that		
5				are OBL, FACW, or	r FAC:	-	50.00%	_ (A
6								
7				Prevalence Index	worksheet			
В				Total % Cove	er of:	Multi	ply by:	_
	0	= Total Cover		OBL species	0	x1=_	0	_
50% of total cover: 0	20%	of total cover:	0	FACW species	0	x 2 =	0	_
apliing/Shrub Stratum (Plot Size: 15' )				FAC species	90	x 3 = _	270	_
None				FACU species	45	×4=	180	_
2				UPL species	0	x 5 = _	0	_
3				Column totals	135	(A)	450	_ (B
				12.		30		
				Prevalence	ce Index = E	3/A =	3.33	
				Hydrophytic Vege	tation Indic	cators:		
	over a diadelate			1 -Rapid Test fo	or Hydrophy	ytic Vege	etation	
				2 - Dominance				
		= Total Cover		3 - Prevalence	Index is ≤3.	.0 <sup>1</sup>		
50% of total cover: <b>0</b>	0	= Total Cover:		Sen constructions			n <sup>1</sup> (Explain)	
50% of total cover: 0 erb Stratum (Plot Size: 5' ) Andropogon gerardii	0			3 - Prevalence	odrophytic V	egetation	ydrology mu	
50% of total cover: 0 erb Stratum (Plot Size: 5' ) Andropogon gerardii Anagallis arvensis	20%	of total cover:	0 FAC	3 - Prevalence Problematic Hy  Indicators of hydric	drophytic V soil and w turbed or pr	egetation etland h	ydrology mu ic.	
50% of total cover: 0  erb Stratum (Plot Size: 5' )  Andropogon gerardii  Anagallis arvensis  Nothoscordum bivalve	90 35 10	of total cover:	FAC FACU FACU	3 - Prevalence Problematic Hy  Indicators of hydric present, unless dist Definitions of Four	ordrophytic V c soil and w turbed or pr r Vegetation ts, excluding	egetation detland heroblemate on Strata	ydrology mu ic. 1: 3 in. (7.6 cm	st be
50% of total cover: 0  erb Stratum (Plot Size: 5' )  Andropogon gerardii  Anagallis arvensis  Nothoscordum bivalve	90 35 10	of total cover:	FACU FACU	3 - Prevalence Problematic Hy  Indicators of hydric present, unless dist Definitions of Fou Tree - Woody plant more in diameter at	ordrophytic V c soil and w turbed or pr r Vegetation ts, excluding	egetation detland heroblemate on Strata	ydrology mu ic. 1: 3 in. (7.6 cm	st be
50% of total cover: 0 erb Stratum (Plot Size: 5' ) Andropogon gerardii Anagallis arvensis Nothoscordum bivalve	90 35 10	of total cover:	FACU FACU	3 - Prevalence Problematic Hy  Indicators of hydric present, unless dist Definitions of Four	ordrophytic V c soil and w turbed or pr r Vegetation ts, excluding	egetation detland heroblemate on Strata	ydrology mu ic. 1: 3 in. (7.6 cm	st be
50% of total cover: 0 erb Stratum (Plot Size: 5' ) Andropogon gerardii Anagallis arvensis Nothoscordum bivalve	90 35 10	of total cover:	FACU FACU	3 - Prevalence Problematic Hy  Indicators of hydric present, unless dist Definitions of Fou Tree - Woody plant more in diameter at height.  Sapling/shrub - W	odrophytic V c soil and w turbed or pr r Vegetatio ts, excluding t breast heigh	regetation etland his problemation Strate g vines 3 ght (DBHs, excluding exclusions excluding excluding excluding exclusions excluding exclusions excluding exclusions excluding exclusions excluding exclusions ex	ydrology muic.  ic.  ii:  iii. (7.6 cm ii), regardles	) or
50% of total cover: 0  erb Stratum (Plot Size: 5' )  Andropogon gerardii  Anagallis arvensis  Nothoscordum bivalve	90 35 10	of total cover:	FACU FACU	3 - Prevalence Problematic Hy  Indicators of hydric present, unless dist Definitions of Fou Tree - Woody plant more in diameter at height.	odrophytic V c soil and w turbed or pr r Vegetatio ts, excluding t breast heigh	regetation etland his problemation Strate g vines 3 ght (DBHs, excluding exclusions excluding excluding excluding exclusions excluding exclusions excluding exclusions excluding exclusions excluding exclusions ex	ydrology muic.  ic.  ii:  iii. (7.6 cm ii), regardles	) or
50% of total cover: 0  erb Stratum (Plot Size: 5' )  Andropogon gerardii  Anagallis arvensis  Nothoscordum bivalve	90 35 10	of total cover:	FACU FACU	3 - Prevalence Problematic Hy  Indicators of hydric present, unless dist Definitions of Fou Tree - Woody plant more in diameter at height.  Sapling/shrub - W 3 in, DBH and great	ordrophytic V c soil and w turbed or pr r Vegetatio ts, excluding t breast height foody plants ter than 3.2 bus (non-wo	retland hobelemate on Strate g vines 3 ght (DBFs, exclude 8 ft (1 moody) pla	ydrology muic.  i:  ii:  iii.  iii.  iii.  iii.  iiii.  iiii.  iiiiii	) or ss of
50% of total cover: 0 erb Stratum (Plot Size: 5' ) Andropogon gerardii Anagallis arvensis Nothoscordum bivalve	90 35 10	of total cover:	FACU FACU	3 - Prevalence Problematic Hy  Indicators of hydric present, unless dist Definitions of Fou Tree - Woody plant more in diameter at height.  Sapling/shrub - W 3 in, DBH and grea	ordrophytic V c soil and w turbed or pr r Vegetatio ts, excluding t breast height	retland hobelemate on Strate g vines 3 ght (DBFs, exclude 8 ft (1 moody) pla	ydrology muic.  i:  ii:  iii.  iii.  iii.  iii.  iiii.  iiii.  iiiiii	) or ss of
50% of total cover: 0 erb Stratum (Plot Size: 5' ) Andropogon gerardii Anagallis arvensis Nothoscordum bivalve	90 35 10	y Y N	FACU FACU	3 - Prevalence Problematic Hy  Indicators of hydric present, unless dist Definitions of Four Tree - Woody plant more in diameter at height.  Sapling/shrub - W 3 in. DBH and great Herb - All herbacec size, and woody plant	ordrophytic V c soil and w turbed or pr r Vegetatio ts, excluding t breast height foody plants ter than 3.2 bus (non-wo	regetation detection of the control	ydrology muic.  ic.  ii:  iii.   ) or ss of	
50% of total cover: 0 erb Stratum (Plot Size: 5' ) Andropogon gerardii Anagallis arvensis Nothoscordum bivalve	90 35 10	y Y N	FACU FACU	3 - Prevalence Problematic Hy  Indicators of hydric present, unless dist Definitions of Fou Tree - Woody plant more in diameter at height.  Sapling/shrub - W 3 in, DBH and great	ordrophytic V c soil and w turbed or pr r Vegetatio ts, excluding t breast height foody plants ter than 3.2 bus (non-wo	regetation detection of the control	ydrology muic.  ic.  ii:  iii.   ) or ss of	
50% of total cover: 0 erb Stratum (Plot Size: 5' ) Andropogon gerardii Anagallis arvensis Nothoscordum bivalve	90 35 10	y Y N	FACU FACU	3 - Prevalence Problematic Hy  Indicators of hydric present, unless dist Definitions of Four Tree - Woody plant more in diameter at height.  Sapling/shrub - W 3 in. DBH and great Herb - All herbaced size, and woody plant Woody vines - All woody v	ordrophytic V c soil and w turbed or pr r Vegetatio ts, excluding t breast height foody plants ter than 3.2 bus (non-wo	regetation detection of the control	ydrology muic.  ic.  ii:  iii.   ) or ss of	
50% of total cover: 0 erb Stratum (Plot Size: 5' ) Andropogon gerardii Anagallis arvensis Nothoscordum bivalve	90 35 10	of total cover:	FACU FACU	3 - Prevalence Problematic Hy  Indicators of hydric present, unless dist Definitions of Four Tree - Woody plant more in diameter at height.  Sapling/shrub - W 3 in. DBH and great Herb - All herbaced size, and woody plant Woody vines - All woody v	ordrophytic V c soil and w turbed or pr r Vegetatio ts, excluding t breast height foody plants ter than 3.2 bus (non-wo	regetation detection of the control	ydrology muic.  ic.  ii:  iii.   ) or ss of	
50% of total cover: 0 erb Stratum (Plot Size: 5' ) Andropogon gerardii Anagallis arvensis Nothoscordum bivalve	90 35 10	Y Y N = Total Cover	FACU FACU	3 - Prevalence Problematic Hy  Indicators of hydric present, unless dist Definitions of Four Tree - Woody plant more in diameter at height.  Sapling/shrub - W 3 in. DBH and great Herb - All herbaced size, and woody plant Woody vines - All woody v	ordrophytic V c soil and w turbed or pr r Vegetatio ts, excluding t breast height foody plants ter than 3.2 bus (non-wo	regetation detection of the control	ydrology muic.  ic.  ii:  iii.   ) or ss of	
50% of total cover: 0	90 35 10	Y Y N = Total Cover	FACU FACU	3 - Prevalence Problematic Hy  Indicators of hydric present, unless dist Definitions of Four Tree - Woody plant more in diameter at height.  Sapling/shrub - W 3 in. DBH and great Herb - All herbaced size, and woody plant Woody vines - All woody v	ordrophytic V c soil and w turbed or pr r Vegetatio ts, excluding t breast height foody plants ter than 3.2 bus (non-wo	regetation detection of the control	ydrology muic.  ic.  ii:  iii.   ) or ss of	
50% of total cover: 0 erb Stratum (Plot Size: 5' ) Andropogon gerardii Anagallis arvensis Nothoscordum bivalve	90 35 10	Y Y N = Total Cover	FACU FACU	3 - Prevalence Problematic Hy  Indicators of hydric present, unless dist Definitions of Four Tree - Woody plant more in diameter at height.  Sapling/shrub - W 3 in. DBH and great Herb - All herbaced size, and woody plant Woody vines - All woody v	ordrophytic V c soil and w turbed or pr r Vegetatio ts, excluding t breast height foody plants ter than 3.2 bus (non-wo	regetation detection of the control	ydrology muic.  ic.  ii:  ii:  iii.	) or ss of
50% of total cover: 0 erb Stratum (Plot Size: 5' ) Andropogon gerardii Anagallis arvensis Nothoscordum bivalve  50% of total cover: 67.5 None	90 35 10	Y Y N = Total Cover	FACU FACU	3 - Prevalence Problematic Hy  Indicators of hydric present, unless dist Definitions of Four Tree - Woody plant more in diameter at height.  Sapling/shrub - W 3 in. DBH and great Herb - All herbaced size, and woody plant Woody vines - All woody v	ordrophytic V c soil and w turbed or pr r Vegetatio ts, excluding t breast height foody plants ter than 3.2 bus (non-wo	regetation detection of the control	ydrology muic.  ic.  ii:  ii:  iii.	) or ss of
50% of total cover: 0 erb Stratum (Plot Size:5')  Andropogon gerardii  Anagallis arvensis  Nothoscordum bivalve  4 5 6 7 8 9 9 9 1 2 50% of total cover:67.5  //oody Vine Stratum (Plot Size:30')  None	90 35 10	Y Y N = Total Cover	FACU FACU	3 - Prevalence Problematic Hy  Indicators of hydric present, unless dist Definitions of Four Tree - Woody plant more in diameter at height.  Sapling/shrub - W 3 in. DBH and great Herb - All herbaced size, and woody plant Woody vines - All woody v	ordrophytic V c soil and w turbed or pr r Vegetatio ts, excluding t breast height foody plants ter than 3.2 bus (non-wo	regetation detection of the control	ydrology muic.  ic.  ii:  ii:  iii.	) or ss of
Solid Stratum   Solid Stratu	90 35 10	Y Y N = Total Cover	FACU FACU	3 - Prevalence Problematic Hy  Indicators of hydric present, unless dist Definitions of Four Tree - Woody plant more in diameter at height.  Sapling/shrub - W 3 in. DBH and great Herb - All herbaced size, and woody plant Woody vines - All woody v	ordrophytic V c soil and w turbed or pr r Vegetatio ts, excluding t breast height foody plants ter than 3.2 bus (non-wo	regetation detection of the control	ydrology muic.  ic.  ii:  ii:  iii.	) or ss of
Solid total cover: 0	90 35 10	Y Y N = Total Cover:	FACU FACU FACU	3 - Prevalence Problematic Hy  Indicators of hydric present, unless dist Definitions of Four Tree - Woody plant more in diameter at height.  Sapling/shrub - W 3 in, DBH and great Herb - All herbaced size, and woody plant woody vines - All wheight.  Hydrophytic	ordrophytic V c soil and w turbed or pr r Vegetatio ts, excluding t breast height foody plants ter than 3.2 bus (non-wo	regetation detection of the control	ydrology muic.  ic.  ii:  ii:  iii.	) or ss of
Solid total cover: 0	90 35 10 135 20%	Y Y N = Total Cover	FACU FACU FACU	3 - Prevalence Problematic Hy  Indicators of hydric present, unless dist Definitions of Four Tree - Woody plant more in diameter at height.  Sapling/shrub - W 3 in. DBH and great Herb - All herbaced size, and woody plant woody vines - All wheight.	drophytic V c soil and w turbed or pr r Vegetatio ts, excluding t breast heig cody plants ter than 3.2 bus (non-wo ants less tha	regetation etland his polemation Stratage vines 3 ght (DBHs, exclude 8 ft (1 m pody) planan 3.28 ft s greate	ydrology muic.  ic.  ii:  ii:  iii.	) or ss of ess th

Remarks:

[하다] [[인터][하다] 프랑이트라이트라이터 아이트 중에는 그리다 그렇게 하는데 하다 하다 가게 되어 하는데 되었다.	eeded to document the indicator or confirm the	absence of indicators.)
Depth Matrix	Redox Features	
	Color (moist) % Type¹ Loc2	Texture Remarks
		ny Sand
		ny Sand
		ly Clay
11-15 7.5YR 6 / 1 85 7.5	YR 5 / 8 15 C PL Loam	ny Sand
pe: C=Concentration, D=Depletion, RM=Redu	ced Matrix, CS=Covered or Coated Sand Grains.	<sup>2</sup> Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all LRI		Indicators for Problematic Hydric Soils <sup>3</sup> :
Histisol (A1)	Polyvalue Below Surface (S8) (LRR S, T, U)	1 cm Muck (A9) (LRR O)
Histic Epipedon (A2)	Thin Dark Surface (S9) (LRR, S, T, U)	2 cm Muck (A10) (LRR S)
₹	Loamy Mucky Mineral (F1) (LRR O)	
Black Histic (A3)		Reduced Vertic (F18) (outside MLRA 150A,B
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19) (LRR P, S, T
Stratified Layers (A5)	X Depleted Matrix (F3)	Anomalous Bright Loamy Soils (F20)
Organic Bodies (A6) (LRR P, T, U)	Redox Dark Surface (F6)	(MLRA 153B)
5 cm Mucky Mineral (A7) (LRR P, T, U)	Depleted Dark Surface (F7)	Red Parent Material (TF2)
Muck Presence (A8) (LRR U)	Redox Depressions (F8)	Very Shallow Dark Surface (TF12)
1 cm Muck (A9) (LRR P, T)	Marl (F10) (LRR U)	Other (Explain in Remarks)
Depleted Below Dark Suface (A11)	Depleted Ochric (F11) (MLRA 151)	
Thick Dark Surface (A12)	Iron-Manganese Masses (F12) (LRR O, P, T)	<sup>3</sup> Indicators of hydrophytic vegetation and
Coast Prairie Redox (A16) (MLRA 150A)	Umbric Surface (F13) (LRR P, T, U)	wetland hydrology must be present,
Sandy Mucky Mineral (S1) (LRR O, S)	Delta Ochric (F17) (MLRA 151)	unless disturbed or problematic.
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 1	149A, 153C, 153D)
	U <del></del>	50 85 UV

Project/Site: Harbor Island		Cit	ty/County: Nuece	County	Sampling Da	ate: March 19, 2019
Applicant/Owner: POCCA			\$5U	State: TX		
Investigator(s): Ashley Bogrand	, Orlando Recio	Se	ction, Township, F	Range: None		
Landform (hillslope, terrace, etc.):	Prairie	Lo	cal relief (concave	e, convex, none):	None	Slope (%): 0
Subregion (LRR or MLRA): LRR T						Datum: NAD83
Soil Map Unit Name: Mustang Fir		_			NWI classification	_
Are climatic / hydrologic conditions	on the site typical for	this time of the y	ear? Yes			
			1.7		1 150	Yes X No
	, or Hydrology					
SUMMARY OF FINDINGS						
			T			
Hydrophytic Vegetation Present?	Yes X	No	Is the Sample	d Area within a		
Hydric Soil Present?	Yes	No X	Wetland?	a Area within a	Yes M	lo X
Wetland Hydrology Present?	Yes	NoX				· · · · · · · · · · · · · · · · · · ·
Remarks:		7				
_						
HYDROLOGY				0-		
Wetland Hydrology Indicators:	and the second second seconds	all that and h		Sec		ninimum of two required)
Primary Indicators (minimum of o	ne is required; check		/D40\		Surface Soil Crack	SACTA DESCRIPTION
Surface Water (A1)		Aquatic Fauna				d Concave Surface (B8)
High Water Table (A2)		Marl Deposits (		_	Drainage Patterns	
Saturation (A3)	<del>-</del>	Hydrogen Sulfic		-	Moss Trim Lines (E	and No. of the second
Water Marks (B1)			spheres on Living	Roots (C3)	Dry-Season Water	
<ul> <li>Sediment Deposits (B2)</li> </ul>	_		educed Iron (C4)		Crayfish Burrows (	20.004
Drift Deposits (B3)	-		duction in Tilled S	oils (C6)		on Aerial Imagery (C9)
<ul> <li>Algal Mat or Crust (B4)</li> </ul>	_	Thin Muck Surf		_	Geomorphic Positi	1 (2)
Iron Deposits (B5)	_	Other (Explain i	in Remarks)		Shallow Aquitard (I	
<ul> <li>Inundation Visible on Aerial I</li> </ul>	magery (B7)			_	FAC-Neutral Test (	
Water-Stained Leaves (B9)					Sphagnum moss (	D8) (LRR T, U)
Field Observations:						
Surface water present?	Yes No_X					
Water table present?	Yes No X					
Saturation present?	Yes No _X	_ Depth (inches	s):	Wetland Hydrol	ogy Present? Y	'es No X
(includes capillary fringe)  Describe Recorded Data (stream	gauge monitoring we	all aerial photos	previous inspection	one) if available:		
Describe Necorded Data (stream	gauge, monitoring we	an, acriai priocos,	previous inspection	stoj, ii dvalidbic.		
Remarks:		~				

	ATION (	i oui ou	rata) -	Use so	CICITU		iles of pla	iiita						
					7.0		Absolute	Dominant	Indicator	Dominance Test	worksheet	:		
ree	Stratum	Plot Siz	:e:	30'	)		% Cover	Species?	Status	Number of Domin				
1 _	None									That Are OBL, FA	ACW, or FAC	D:	1	_ (A)
2 _										. Total Number of 0	Dominant			
_										Species Across a	II Strata:		1	_ (B)
										Percent of Domin	ant Species	that		
5 _										are OBL, FACW,			100.00%	_ (A/
								1050		Prevalence Index	x workshee	t		
										Total % Cov	ver of:	Mult	iply by:	
							0	= Total Cover		OBL species	0	x 1 =	0	
		3	50% of	total cov	er:	0	20%	of total cover:	0	FACW species		x 2 =		
ilae	ing/Shrub									FAC species		x 3 =	294	
-	None									FACU species			, 240	_
-										UPL species		00 10 10		
8										Column totals		(A) _		— (B)
_										Column totals _	103	. (^) _	044	_ (D)
										-	aaa lad	D/A	0.04	
								<del></del>		Hydrophytic Veg	nce Index =		3.34	-
-														
										1 -Rapid Test			etation	
1										X 2 - Dominanc				
_								T		0 0 1		0 0		
_							0	= Total Cover		- Maria Company Company	e Index is ≤			
-			50% of	total cov	/er:	0	-	of total cover:		Problematic F			on <sup>1</sup> (Explain)	
_	Stratum				_	0	-			- Marie Company of the Company of th			on <sup>1</sup> (Explain)	
erb	Stratum	(Plot Siz	e:	5'	)		20%			- Marie Company of the Company of th	Hydrophytic \	Vegetation		
erb	Stratum Andropo	_ (Plot Siz	e: rdii		)		20%	of total cover:	0	Problematic H	Hydrophytic \	Vegetation	nydrology mu	
erb	Stratum  Andropo  Anagallis	_ (Plot Siz ogon geral s arvensis	e: rdii	5'	)		20% 98 30	of total cover:	FAC FACU	Problematic F	Hydrophytic \ Iric soil and vilisturbed or p	Vegetation wetland had broblema	nydrology mu itic.	
erb	Stratum  Andropo  Anagallia  Vicia sat	Plot Size ogon geral s arvensis	rdii s	5'	)		98 30 30	of total cover:	FAC FACU	Problematic Formula Proble	Hydrophytic Viric soil and visturbed or pour Vegetationts, excludir	wetland horoblemation Strating vines	nydrology mu itic. a: 3 in. (7.6 cm	ust be
erb	Stratum  Andropo  Anagalli:  Vicia sat	Plot Sizogon geral s arvensis tiva ous subero	rdii s	5'	)		98 30 30 5	of total cover:	FACU FACU FACW	Problematic F  Indicators of hyd present, unless di Definitions of Fo Tree - Woody pla more in diameter	Hydrophytic Viric soil and visturbed or pour Vegetationts, excludir	wetland horoblemation Strating vines	nydrology mu itic. a: 3 in. (7.6 cm	ust be
erb	Stratum  Andropo  Anagallii  Vicia sat	_ (Plot Siz ogon gerai s arvensis tiva ous subero	rdii s osus	5'			98 30 30 5	of total cover:	FACU FACU FACW	Problematic Formula Proble	Hydrophytic Viric soil and visturbed or pour Vegetationts, excludir	wetland horoblemation Strating vines	nydrology mu itic. a: 3 in. (7.6 cm	ust be
erb	Stratum  Andropo  Anagalli:  Vicia sat  Gonolob	(Plot Siz ogon gerai s arvensis tiva ous subero	rdii s	5'			98 30 30 5	of total cover:  Y N N N	FACU FACU FACU FACW	Problematic F  Indicators of hyd present, unless di Definitions of Fo Tree - Woody pla more in diameter	ric soil and visturbed or pour Vegetations, excluding at breast he	wetland horoblemation Strating vines eight (DB	nydrology mu itic. a: 3 in. (7.6 cm H), regardles	) or
erb	Stratum  Andropo  Anagallii  Vicia sat  Gonolob	(Plot Siz ogon gerai s arvensis tiva ous subero	re:rdii s	5'			98 30 30 5	of total cover:	FACU FACU FACU FACW	Problematic F  Indicators of hydrogenet, unless di  Definitions of Fo  Tree - Woody pla more in diameter height.	ric soil and visturbed or pour Vegetationts, excludir at breast he	wetland horoblema fon Strating vines eight (DB	nydrology mu itic. a: 3 in. (7.6 cm H), regardles	) or
erb -	Stratum  Andropo  Anagallii  Vicia sat  Gonolob	(Plot Siz ogon gerai s arvensis tiva ous subero	re:rdii s	5'			98 30 30 5	of total cover:  Y N N N	FACU FACU FACU FACW	Problematic F  Indicators of hydrogenet, unless di  Definitions of Fo  Tree - Woody pla more in diameter height.  Sapling/shrub - N 3 in, DBH and green	ric soil and visturbed or pour Vegetations, excluding at breast he Woody plant eater than 3.	wetland horoblema on Strating vines eight (DB	nydrology mu a: 3 in. (7.6 cm H), regardles ding vines, le n) tall.	) or ss of
erb	Stratum  Andropo  Anagalli  Vicia sat  Gonolob	(Plot Siz ogon gerai s arvensis tiva ous subero	re:rdii_ss	5'			98 30 30 5	of total cover:  Y N N N	FACU FACU FACU FACW	Problematic F  Indicators of hydrogenet, unless di Definitions of Fo Tree - Woody pla more in diameter height.  Sapling/shrub - V 3 in, DBH and gree Herb - All herbace	ric soil and visturbed or pour Vegetations, excludir at breast he Woody plant eater than 3.	wetland horoblema on Strating vines eight (DB	nydrology mu itic. a: 3 in. (7.6 cm H), regardles ding vines, le n) tall.	) or ss of
	Stratum  Andropo  Anagalli:  Vicia sat  Gonolob	(Plot Siz ogon gerai s arvensis tiva ous subero	re:rdii	5'			98 30 30 5	of total cover:  Y N N N	FACU FACU FACU FACW	Problematic F  Indicators of hydrogenet, unless di  Definitions of Fo  Tree - Woody pla more in diameter height.  Sapling/shrub - N 3 in, DBH and green	ric soil and visturbed or pour Vegetations, excludir at breast he Woody plant eater than 3.	wetland horoblema on Strating vines eight (DB	nydrology mu itic. a: 3 in. (7.6 cm H), regardles ding vines, le n) tall.	) or ss of
	Stratum  Andropo  Anagalli:  Vicia sat  Gonolob	(Plot Siz ogon gerai s arvensis tiva ous subero	re:rdii	5'			98 30 30 5	of total cover:  Y N N N	FACU FACU FACU FACW	Problematic F  Indicators of hydrogenet, unless di Definitions of Fo Tree - Woody pla more in diameter height.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody p	ric soil and visturbed or pour Vegetations, excludir at breast he Woody plant eater than 3.	wetland horoblema fon Strating vines eight (DB ts, exclude 28 ft (1 r	nydrology mutic.  a: 3 in. (7.6 cm H), regardles ding vines, le n) tall. ants, regardle ft tall.	) or ss of ess tha
erb	Stratum  Andropo  Anagalli:  Vicia sat  Gonolob	(Plot Siz ogon geral s arvensis tiva ous subero	re:rdii	5'			98 30 30 5	of total cover:  Y N N N	FACU FACU FACU FACW	Problematic F  Indicators of hydrogenet, unless di Definitions of Fo Tree - Woody pla more in diameter height.  Sapling/shrub - V 3 in, DBH and gree Herb - All herbace size, and woody p	ric soil and visturbed or pour Vegetations, excludir at breast he Woody plant eater than 3.	wetland horoblema fon Strating vines eight (DB ts, exclude 28 ft (1 r	nydrology mutic.  a: 3 in. (7.6 cm H), regardles ding vines, le n) tall. ants, regardle ft tall.	) or ess of ess tha
erb	Stratum  Andropo  Anagallii  Vicia sat  Gonolob	(Plot Siz ogon geral s arvensis tiva ous subero	re:rdii	5'			98 30 30 5	of total cover:  Y N N N	FACU FACU FACW	Problematic F  Indicators of hydrogenet, unless di Definitions of Fo Tree - Woody pla more in diameter height.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody p	ric soil and visturbed or pour Vegetations, excludir at breast he Woody plant eater than 3.	wetland horoblema fon Strating vines eight (DB ts, exclude 28 ft (1 r	nydrology mutic.  a: 3 in. (7.6 cm H), regardles ding vines, le n) tall. ants, regardle ft tall.	) or ss of ess tha
erb	Stratum  Andropo  Anagallii  Vicia sat  Gonolob	(Plot Siz ogon gerai s arvensis tiva ous subera	re:rdii s osus	5'			20%  98  30  30  5	of total cover:	FACU FACU FACW	Problematic F  Indicators of hydrogenet, unless di Definitions of Fo Tree - Woody pla more in diameter height.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody p	ric soil and visturbed or pour Vegetations, excludir at breast he Woody plant eater than 3.	wetland horoblema fon Strating vines eight (DB ts, exclude 28 ft (1 r	nydrology mutic.  a: 3 in. (7.6 cm H), regardles ding vines, le n) tall. ants, regardle ft tall.	) or ess of ess tha
erb	Stratum  Andropo  Anagallii  Vicia sat  Gonolob	(Plot Siz	re:rdii ss	5'	)		20%  98  30  30  5	of total cover:  Y N N N = Total Cover	FACU FACU FACW	Problematic F  Indicators of hydrogenet, unless di Definitions of Fo Tree - Woody pla more in diameter height.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody p	ric soil and visturbed or pour Vegetations, excludir at breast he Woody plant eater than 3.	wetland horoblema fon Strating vines eight (DB ts, exclude 28 ft (1 r	nydrology mutic.  a: 3 in. (7.6 cm H), regardles ding vines, le n) tall. ants, regardle ft tall.	) or ess of ess tha
erb	Stratum  Andropo  Anagallii  Vicia sat  Gonolob	(Plot Siz	re:rdii ss	5'	)		20%  98  30  30  5	of total cover:  Y N N N = Total Cover	FACU FACU FACW	Problematic F  Indicators of hydrogenet, unless di Definitions of Fo Tree - Woody pla more in diameter height.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody p	ric soil and visturbed or pour Vegetations, excludir at breast he Woody plant eater than 3.	wetland horoblema fon Strating vines eight (DB ts, exclude 28 ft (1 r	nydrology mutic.  a: 3 in. (7.6 cm H), regardles ding vines, le n) tall. ants, regardle ft tall.	) or ess of ess tha
erb	Stratum  Andropo  Anagalli: Vicia sat  Gonolob  dy Vine Str	(Plot Siz	re:rdii s s osus 50% of (Plot Si:	total cov	//er:	81.5	20%  98  30  30  5	of total cover:  Y N N N = Total Cover	FACU FACU FACW	Problematic F  Indicators of hydrogenet, unless di Definitions of Fo Tree - Woody pla more in diameter height.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody p	ric soil and visturbed or pour Vegetations, excludir at breast he Woody plant eater than 3.	wetland horoblema fon Strating vines eight (DB ts, exclude 28 ft (1 r	nydrology mutic.  a: 3 in. (7.6 cm H), regardles ding vines, le n) tall. ants, regardle ft tall.	) or ess of ess tha
==rb ==================================	Stratum  Andropo  Anagallia  Vicia sat  Gonolob  dy Vine Str	(Plot Siz	re:rdii ss	total cov	//er:)	81.5	20%  98  30  30  5	of total cover:  Y N N N = Total Cover	FACU FACU FACW	Problematic F  Indicators of hydrogenet, unless di Definitions of Fo Tree - Woody pla more in diameter height.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody p	ric soil and visturbed or pour Vegetations, excludir at breast he Woody plant eater than 3.	wetland horoblema fon Strating vines eight (DB ts, exclude 28 ft (1 r	nydrology mutic.  a: 3 in. (7.6 cm H), regardles ding vines, le n) tall. ants, regardle ft tall.	) or ess of ess tha
= rb =	Stratum  Andropo  Anagallii  Vicia sat  Gonolob  dy Vine Str	(Plot Siz	re:rdii s s osus 50% of (Plot Si:	total cov	//er:	81.5	20%  98  30  30  5	of total cover:  Y N N  N  Total Cover of total cover:	FACU FACU FACW	Problematic F  Indicators of hydrogenet, unless di Definitions of Fo Tree - Woody pla more in diameter height.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody p	ric soil and visturbed or pour Vegetations, excludir at breast he Woody plant eater than 3.	wetland horoblema fon Strating vines eight (DB ts, exclude 28 ft (1 r	nydrology mutic.  a: 3 in. (7.6 cm H), regardles ding vines, le n) tall. ants, regardle ft tall.	) or ess of ess tha
erb	Stratum  Andropo  Anagallii  Vicia sat  Gonolob  dy Vine Str	(Plot Siz	re:rdii s s osus 50% of (Plot Si:	total cov	//er:	81.5	20%  98  30  30  5	of total cover:  Y N N  N  Total Cover of total cover:	FACU FACU FACW	Problematic F  Indicators of hydrogenet, unless di Definitions of Fo Tree - Woody pla more in diameter height.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody p	ric soil and visturbed or pour Vegetations, excludir at breast he Woody plant eater than 3.	wetland horoblema fon Strating vines eight (DB ts, exclude 28 ft (1 r	nydrology mutic.  a: 3 in. (7.6 cm H), regardles ding vines, le n) tall. ants, regardle ft tall.	) or ess of ess tha
erb   2 3 4 5 5 7 _ 3 1 2 7 _ 6 _ 6 _ 2 7 _ 6 _ 6 _ 6 _ 6 _ 6 _ 6 _ 6 _ 6 _	Stratum  Andropo  Anagallii  Vicia sat  Gonolob  dy Vine Str	(Plot Siz	re:rdii s s osus 50% of (Plot Si:	total cov	//er:	81.5	20%  98  30  30  5	of total cover:  Y N N N  Total Cover of total cover:	FACU FACU FACU FACW	Problematic F  Indicators of hydrogenet, unless di  Definitions of Fo  Tree - Woody pla more in diameter height.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody pla Woody vines - Al height.	ric soil and visturbed or pour Vegetations, excludir at breast he Woody plant eater than 3.	wetland horoblema fon Strating vines eight (DB ts, exclude 28 ft (1 r	nydrology mutic.  a: 3 in. (7.6 cm H), regardles ding vines, le n) tall. ants, regardle ft tall.	) or ess of ess tha
12 3 4 5 7 8 9 1 2 Vood	Stratum  Andropo  Anagallii  Vicia sat  Gonolob  dy Vine Str	(Plot Siz	re:rdii s s osus 50% of (Plot Si:	total cov	//er:	81.5	20%  98  30  30  5	of total cover:  Y N N  N  Total Cover of total cover:	FACU FACU FACU FACW	Problematic F  Indicators of hydrogenet, unless di Definitions of Fo Tree - Woody pla more in diameter height.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody p	ric soil and visturbed or pour Vegetations, excluding at breast he Woody plant eater than 3.  eous (non-wolants less that it woody vine)	wetland horoblema fon Strating vines seight (DB tts, exclude 28 ft (1 r voody) planan 3.28 es greate	nydrology mutic.  a: 3 in. (7.6 cm H), regardles ding vines, le n) tall. ants, regardle ft tall.	or ss of ess that ess of ft in

file Description: (Describe to the depth not)  Matrix		x Features		oi comi	illi tile abse	nice of indicators	.)	
	Color (moist)		Type <sup>1</sup>	Loc2	Tex	ture	Rem	narks
	5YR 4 / 6	5	C	PL	Sandy CI			
: C=Concentration, D=Depletion, RM=Reduc				Sand Gra		cation: PL=Pore L		
Iric Soil Indicators: (Applicable to all LRF	Rs, unless other	wise note	ed.)		In	dicators for Probl	lematic Hydric	Soils':
Histisol (A1)	Polyvalue					1 cm Muck (A9) (		
Histic Epipedon (A2)	Thin Dark				_	2 cm Muck (A10)		
Black Histic (A3)	Loamy Mu	•		LRR O)	_	Reduced Vertic (		
Hydrogen Sulfide (A4)	Loamy Gle	-			_	Piedmont Floodp		
Stratified Layers (A5)	Depleted N				_	Anomalous Brigh	nt Loamy Soils (F	-20)
Organic Bodies (A6) (LRR P, T, U)	Redox Dar					(MLRA 153B)		
5 cm Mucky Mineral (A7) (LRR P, T, U)	Depleted [		, ,		_	Red Parent Mate		
Muck Presence (A8) (LRR U)	Redox De		(F8)			Very Shallow Dark Surface (TF12)		
1 cm Muck (A9) (LRR P, T)	Marl (F10)	, ,			_	Other (Explain in	Remarks)	
Depleted Below Dark Suface (A11)	Depleted (	•	, .					
Thick Dark Surface (A12)	Iron-Mang		,	, ,	O, P, T)	<sup>3</sup> Indicators of hyd		
Coast Prairie Redox (A16) (MLRA 150A)	Umbric Su	-				wetland hydrolog	- '	ent,
Sandy Mucky Mineral (S1) (LRR O, S)	Delta Ochi					unless disturbed	or problematic.	
Sandy Gleyed Matrix (S4)	Reduced \	,		-				
Sandy Redox (S5)	Piedmont					4500 4500)		
Stripped Matrix (S6)	Anomalou	s Bright Lo	amy So	oils (F20) (	MLRA 149A	, 153C, 153D)		
Dark Surface (S7) (LRR P, S, T, U)								
strictive Layer (if observed):								
ype: N/A Depth (inches): N/A		-		Hydric s	oil present?	Yes	No	X
narks:				,	on procent.			

Project/Site: Harbor Island		City/County: Nuece	County	Sampling Date:	March 19, 2019
Applicant/Owner: POCCA			State: TX	Sampling Point:	13
Investigator(s): Ashley Bogrand, O	rlando Recio	Section, Township, F	Range: None		
Landform (hillslope, terrace, etc.): Pr	airie	Local relief (concave	e, convex, none): None	e Slope	(%): 0
Subregion (LRR or MLRA): LRR T	Lat: 27.5	34782600	Long: -97.06760		m: NAD83
Soil Map Unit Name: Mustang Fine S	Sand, 0 to 1 percent		N	VI classification:	
Are climatic / hydrologic conditions on	the site typical for this time of	of the year? Yes	X No (If	no, explain in Remark	s.)
Are vegetation , Soil ,	or Hydrology signific	antly disturbed?	Are "normal circumsta	nces" present? Ye	s X No
	or Hydrologynatural				
	5				
SUMMARY OF FINDINGS – A	ttach site map shown	ig sampling point	iocations, transe	cts, important rea	atures, etc.
Hydrophytic Vegetation Present?	Yes X No				
Hydric Soil Present?	Yes X No	I is the Sample	d Area within a		
70027400 00000 48800 00 000 4880 0000 000 000		3181 - 1411   1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Y	esNo	<u> </u>
Wetland Hydrology Present?	Yes No)	<u> </u>			
Remarks:					
HYDROLOGY					
Wetland Hydrology Indicators:			Second	ary Indicators (minimu	im of two required)
Primary Indicators (minimum of one	is required: check all that an	nlv)		face Soil Cracks (B6)	
Surface Water (A1)	U SCHOOL SECTION AND ADDRESS OF A SECTION ADDRESS OF A SECTION AND ADDRESS OF A SECTION ADDRESS OF A	Fauna (B13)		arsely Vegetated Cond	
High Water Table (A2)	H <del></del>	posits (B15) (LRR U)	· · · · · · · · · · · · · · · · · · ·	ainage Patterns (B10)	ave duriace (bb)
Saturation (A3)	District Control of the Control of t	n Sulfide Odor (C1)		ss Trim Lines (B16)	
Water Marks (B1)	10 Total Control Contr	Rhizospheres on Living	-		(02)
The state of the s		e of Reduced Iron (C4)	1	-Season Water Table	(C2)
Sediment Deposits (B2)	2.——.		· — ·	lyfish Burrows (C8)	(-11 (OR)
Drift Deposits (B3)	(Charles)	ron Reduction in Tilled S ck Surface (C7)	* 1 3 3 3 3 3 3 3 -	turation Visible on Aeri	
Algal Mat or Crust (B4)			_	omorphic Position (D2	)
Iron Deposits (B5)		xplain in Remarks)		allow Aquitard (D3)	
Inundation Visible on Aerial Ima	gery (B7)			C-Neutral Test (D5)	
Water-Stained Leaves (B9)			Spi	nagnum moss (D8) (LI	RR T, U)
Field Observations:		MC-2-03 (************************************			
	es No_X Depth				
	es No_X Depth				
	es No_X Depth	(inches):	Wetland Hydrology I	Present? Yes	NoX
(includes capillary fringe)  Describe Recorded Data (stream gate	ige monitoring well aerial r	hotos previous inspection	ons) if available		
Describe Nessian Lana (Sursum gar	.g.,		,,		
Remarks:					
1					

	ATION (Four S	irala) - Use			oo o. p.a						
					Absolute	Dominant	Indicator	Dominance Test	worksheet:		
	Stratum (Plot S	ize: 30'	)	1	% Cover	Species?	Status	Number of Domin			
1 _	None							That Are OBL, FA	CW, or FAC:	22	_ (A)
2 _								Total Number of D	Dominant		
3 _		X4.02.						Species Across al	II Strata:	2	_ (B)
4 _								Percent of Domina	ant Species that		
5 _		· · · · · · · · · · · · · · · · · · ·						are OBL, FACW,	or FAC:	100.00%	_ (A/I
6 _		-									-
7 _			10/42-51					Prevalence Index	x worksheet		
8 _							2	Total % Cov	ver of: Mul	Itiply by:	_
					0	= Total Cover		OBL species _	70 x 1 =		
		50% of total of	over:	0	20%	of total cover:	0	FACW species _	100 x 2 =	200	_
Saplii	ing/Shrub Stratum	_(Plot Size:	15'	)				FAC species	0 ×3=	0	_
1 _	None							FACU species _	5 × 4 =	20	_
2 _								UPL species	0 x 5 =	0	_
3 _								Column totals	175 (A)	290	_ (B)
4 _											
5 _									nce Index = B/A =	1.66	
6 _								Hydrophytic Veg	etation Indicators:		
7 _								1 -Rapid Test	for Hydrophytic Ve	getation	
•	REST N							X 2 - Dominance	e Test is >50%		
۳ _		15.20).	·		0	= Total Cover	91111.00=1:	X 3 - Prevalence	a Inday is <3 n1		
8 –						. 0.0. 00.0.		71 0 1 1 0 1 0 1 0 1 0 1	e muck is \$5.0		
8 _		50% of total of	over:	0		of total cover:			e maex is ⊴5.0 Iydrophytic Vegetat	ion¹ (Explain)	
	Stratum (Plot S									ion <sup>1</sup> (Explain)	
lerb	Stratum (Plot S	ize: <b>5'</b>			20%			Problematic H	lydrophytic Vegetat		
lerb	and the second	ize: <b>5'</b>			20%	of total cover:	0	Problematic H		hydrology mu	
1 _	Panicum repens	rculosa	)		20% 100 70	of total cover:	0 FACW	Problematic H  Indicators of hydropresent, unless dis	Hydrophytic Vegetat	hydrology mu atic.	
lerb	Panicum repens Eleocharis tuber	rculosa s americanus	)		20% 100 70	of total cover:	0 FACW	Problematic H  Indicators of hydropresent, unless discontinuous of Fortier Tree - Woody plan	ric soil and wetland sturbed or problem: ur Vegetation Stra nts, excluding vines	hydrology mu atic. ita: s 3 in. (7.6 cm	st be
lerb 1 2 3	Panicum repens Eleocharis tuber Schoeneoplectu Nothoscordum b	culosa s americanus	)		20% 100 70 10 5	of total cover:  Y Y N N	FACW OBL	Problematic H  Indicators of hydrogresent, unless die  Definitions of Fortage  Tree - Woody plant more in diameter a	lydrophytic Vegetat ric soil and wetland sturbed or problem: ur Vegetation Stra	hydrology mu atic. ita: s 3 in. (7.6 cm	st be
lerb 1 2 3 4	Panicum repens Eleocharis tuber Schoeneoplectu Nothoscordum b	rculosa s americanus pivalve	)		20% 100 70 10 5	of total cover:	FACW OBL	Problematic H  Indicators of hydropresent, unless discontinuous of Fortier Tree - Woody plan	ric soil and wetland sturbed or problem: ur Vegetation Stra nts, excluding vines	hydrology mu atic. ita: s 3 in. (7.6 cm	st be
1 2 3 4 5	Panicum repens Eleocharis tuber Schoeneoplectu Nothoscordum b	culosa s americanus pivalve			20% 100 70 10 5	of total cover:	FACW OBL	Problematic H  Indicators of hydrogresent, unless die  Definitions of Formation Tree - Woody plan more in diameter a height.  Sapling/shrub - V	hydrophytic Vegetat ric soil and wetland sturbed or problems ur Vegetation Stra nts, excluding vines at breast height (DE Woody plants, exclu	hydrology mu atic. ta: s 3 in. (7.6 cm BH), regardles	) or
Herb  1 2 3 4 5 6 7	Panicum repens Eleocharis tuber Schoeneoplectu Nothoscordum b	rculosa s americanus pivalve			20% 100 70 10 5	Y Y N N	FACW OBL	Problematic H  Indicators of hydrogresent, unless die  Definitions of Formation Tree - Woody plan more in diameter a height.  Sapling/shrub - V	hydrophytic Vegetat ric soil and wetland sturbed or problem: ur Vegetation Stra nts, excluding vines at breast height (DE	hydrology mu atic. ta: s 3 in. (7.6 cm BH), regardles	) or
derb  1 _ 2 _ 3 _ 4 _ 5 _ 6 _ 7 _ 8	Panicum repens Eleocharis tuber Schoeneoplectu Nothoscordum b	rculosa s americanus pivalve	)		20% 100 70 10 5	Y Y N N	FACW OBL	Problematic H  Indicators of hydrogresent, unless die  Definitions of Formation  Tree - Woody plan more in diameter a height.  Sapling/shrub - V 3 in. DBH and green	hydrophytic Vegetat ric soil and wetland sturbed or problems ur Vegetation Stra nts, excluding vines at breast height (DE Woody plants, exclu	hydrology mu atic. ta: s 3 in. (7.6 cm BH), regardles ading vines, le m) tall.	) or ss of
derb  1 _ 2 _ 3 _ 4 _ 5 _ 6 _ 7 _ 8 _ 9 _ 9	Panicum repens Eleocharis tuber Schoeneoplectu Nothoscordum b	rculosa s americanus pivalve	)		20% 100 70 10 5	Y Y N N	FACW OBL	Problematic H  Indicators of hydrogresent, unless die  Definitions of Formore in diameter and height.  Sapling/shrub - V 3 in. DBH and green Herb - All herbace	ric soil and wetland sturbed or problems ur Vegetation Strants, excluding vines at breast height (DE Woody plants, excluding vines at a strants).	hydrology mu atic. ta: s 3 in. (7.6 cm 3H), regardles iding vines, le m) tall.	) or ss of
derb   1	Panicum repens Eleocharis tuber Schoeneoplectu Nothoscordum b	rculosa s americanus nivalve			20% 100 70 10 5	Y Y N N	FACW OBL	Problematic H  Indicators of hydrogresent, unless die  Definitions of Formation Tree - Woody plan more in diameter sheight.  Sapling/shrub - V 3 in. DBH and green Herb - All herbace size, and woody p	ric soil and wetland sturbed or problems ur Vegetation Strants, excluding vines at breast height (DE Woody plants, excluding that the sate of the sate	hydrology mu atic. ta: s 3 in. (7.6 cm 3H), regardles iding vines, le m) tall. lants, regardl	) or ss of ss tha
1 _ 2 _ 3 _ 4 _ 5 _ 6 _ 7 _ 9 _ 110 _ 111	Panicum repens Eleocharis tuber Schoeneoplectu Nothoscordum b	rculosa s americanus nivalve			20% 100 70 10 5	Y Y N N	FACW OBL	Problematic H  Indicators of hydrogresent, unless die  Definitions of Formation Tree - Woody plan more in diameter sheight.  Sapling/shrub - V 3 in. DBH and green Herb - All herbace size, and woody p	ric soil and wetland sturbed or problems ur Vegetation Strants, excluding vines at breast height (DE Woody plants, excluding vines at the action of the course of the cour	hydrology mu atic. ta: s 3 in. (7.6 cm 3H), regardles iding vines, le m) tall. lants, regardl	) or ss of ss tha
1 _ 2 _ 3 _ 4 _ 5 _ 6 _ 7 _ 9 _ 110 _ 111	Panicum repens Eleocharis tuber Schoeneoplectu Nothoscordum b	rculosa s americanus nivalve			20% 100 70 10 5	of total cover:	FACW OBL	Problematic H  Indicators of hydrogresent, unless die  Definitions of Formation Tree - Woody plan more in diameter sheight.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody p  Woody vines - All	ric soil and wetland sturbed or problems ur Vegetation Strants, excluding vines at breast height (DE Woody plants, excluding that the sate of the sate	hydrology mu atic. ta: s 3 in. (7.6 cm 3H), regardles iding vines, le m) tall. lants, regardl	) or ss of ss tha
1 _ 2 _ 3 _ 4 _ 5 _ 6 _ 7 _ 9 _ 110 _ 111	Panicum repens Eleocharis tuber Schoeneoplectu Nothoscordum b	ize: 5' rculosa s americanus vivalve			20% 100 70 10 5	Y Y N N = Total Cover	FACW OBL	Problematic H  Indicators of hydrogresent, unless die  Definitions of Formation Tree - Woody plan more in diameter sheight.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody p  Woody vines - All	ric soil and wetland sturbed or problems ur Vegetation Strants, excluding vines at breast height (DE Woody plants, excluding that the sate of the sate	hydrology mu atic. ta: s 3 in. (7.6 cm 3H), regardles iding vines, le m) tall. lants, regardl	) or ss of ss tha
derb  1 2 3 4 5 7 8 9 10 11	Panicum repens Eleocharis tuber Schoeneoplectu Nothoscordum b	ize: 5' rculosa s americanus nivalve	over:	92.5	20% 100 70 10 5	of total cover:	FACW OBL	Problematic H  Indicators of hydrogresent, unless die  Definitions of Formation Tree - Woody plan more in diameter sheight.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody p  Woody vines - All	ric soil and wetland sturbed or problems ur Vegetation Strants, excluding vines at breast height (DE Woody plants, excluding that the sate of the sate	hydrology mu atic. ta: s 3 in. (7.6 cm 3H), regardles iding vines, le m) tall. lants, regardl	) or ss of ss tha
derb  1 2 3 4 5 7 8 9 10 11	Panicum repens Eleocharis tuber Schoeneoplectu Nothoscordum b	ize: 5' rculosa s americanus vivalve	over:	92.5	20% 100 70 10 5	Y Y N N = Total Cover	FACW OBL	Problematic H  Indicators of hydrogresent, unless die  Definitions of Formation Tree - Woody plan more in diameter sheight.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody p  Woody vines - All	ric soil and wetland sturbed or problems ur Vegetation Strants, excluding vines at breast height (DE Woody plants, excluding that the sate of the sate	hydrology mu atic. ta: s 3 in. (7.6 cm 3H), regardles iding vines, le m) tall. lants, regardl	) or ss of ss tha
3 _ 4 _ 5 _ 6 _ 7 _ 8 _ 9 11 12 Vocood 1	Panicum repens Eleocharis tuber Schoeneoplectu Nothoscordum b	ize:5'  rculosa s americanus  bivalve  50% of total of (Plot Size:	over:	92.5	20% 100 70 10 5	Y Y N N = Total Cover	FACW OBL	Problematic H  Indicators of hydrogresent, unless die  Definitions of Formation Tree - Woody plan more in diameter sheight.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody p  Woody vines - All	ric soil and wetland sturbed or problems ur Vegetation Strants, excluding vines at breast height (DE Woody plants, excluding that the sate of the sate	hydrology mu atic. ta: s 3 in. (7.6 cm 3H), regardles iding vines, le m) tall. lants, regardl	) or ss of ss tha
Herb 1 _ 2 _ 3 _ 4 _ 5 _ 6 _ 7 _ 8 _ 9 _ 110 _ 111 _ 112	Panicum repens Eleocharis tuber Schoeneoplectu Nothoscordum b	ize: 5' rculosa s americanus nivalve	over:	92.5	20% 100 70 10 5	Y Y N N = Total Cover	FACW OBL	Problematic H  Indicators of hydrogresent, unless die  Definitions of Formation Tree - Woody plan more in diameter sheight.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody p  Woody vines - All	ric soil and wetland sturbed or problems ur Vegetation Strants, excluding vines at breast height (DE Woody plants, excluding that the sate of the sate	hydrology mu atic. ta: s 3 in. (7.6 cm 3H), regardles iding vines, le m) tall. lants, regardl	) or ss of ss tha
Herb 1 _ 2 _ 3 _ 4 _ 5 _ 6 _ 7 _ 8 _ 9 _ 110 _ 111 _ 112	Panicum repens Eleocharis tuber Schoeneoplectu Nothoscordum b	ize:5'  rculosa s americanus  bivalve  50% of total of (Plot Size:	over:	92.5	20% 100 70 10 5	Y Y N N = Total Cover	FACW OBL	Problematic H  Indicators of hydrogresent, unless die  Definitions of Formation Tree - Woody plan more in diameter sheight.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody p  Woody vines - All	ric soil and wetland sturbed or problems ur Vegetation Strants, excluding vines at breast height (DE Woody plants, excluding that the sate of the sate	hydrology mu atic. ta: s 3 in. (7.6 cm 3H), regardles iding vines, le m) tall. lants, regardl	) or ss of ss tha
Herb  1	Panicum repens Eleocharis tuber Schoeneoplectu Nothoscordum b	ize:5'  rculosa s americanus  bivalve  50% of total of (Plot Size:	over:	92.5	20% 100 70 10 5	Y Y N N = Total Cover	FACW OBL	Problematic H  Indicators of hydrogresent, unless die  Definitions of Formation Tree - Woody plan more in diameter sheight.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody p  Woody vines - All	ric soil and wetland sturbed or problems ur Vegetation Strants, excluding vines at breast height (DE Woody plants, excluding that the sate of the sate	hydrology mu atic. ta: s 3 in. (7.6 cm 3H), regardles iding vines, le m) tall. lants, regardl	) or ss of ss tha
Herb  1 _ 2 _ 3 _ 4 5 _ 6 _ 7 _ 8 _ 9 _ 10 _ 11 _ 12   Nooc  1 _ 2 10 10 _ 2 10 _ 2 10 _ 2 10 _ 2 10 _ 2 10 _ 2 10 _ 2 10 _ 2 10 _ 2 10 _ 2 10 _ 2 10 10 _ 2 10 _ 2 10 _ 2 10 _ 2 10 _ 2 10 _ 2 10 _ 2 10 _ 2 10 _ 2 10 _ 2 10 _ 2 10	Panicum repens Eleocharis tuber Schoeneoplectu Nothoscordum b	ize:5'  rculosa s americanus  bivalve  50% of total of (Plot Size:	over:	92.5	20%  100  70  10  5  185  20%	Y Y N N = Total Cover:	FACW OBL  FACU  37	Problematic H  Indicators of hydrogresent, unless die  Definitions of Formation Tree - Woody plan more in diameter sheight.  Sapling/shrub - V 3 in. DBH and gree Herb - All herbace size, and woody p  Woody vines - All	ric soil and wetland sturbed or problems ur Vegetation Strants, excluding vines at breast height (DE Woody plants, excluding that the sate of the sate	hydrology mu atic. ta: s 3 in. (7.6 cm 3H), regardles iding vines, le m) tall. lants, regardl	) or ss of sss tha
Herb  1	Panicum repens Eleocharis tuber Schoeneoplectu Nothoscordum b	ize:5'  rculosa s americanus  bivalve  50% of total of (Plot Size:	over:	92.5	20%  100  70  10  5  185  20%	Y Y N N = Total Cover	FACW OBL FACU	Problematic H  Indicators of hydrogresent, unless die  Definitions of Fort Tree - Woody plar more in diameter a height.  Sapling/shrub - V 3 in. DBH and gree  Herb - All herbace size, and woody plared woody vines - All height.	Hydrophytic Vegetation of soil and wetland sturbed or problems ur Vegetation Strants, excluding vines at breast height (DE Woody plants, exclusater than 3.28 ft (1 eous (non-woody) polants less than 3.28 I woody vines great	hydrology mu atic. ta: s 3 in. (7.6 cm 3H), regardles iding vines, le m) tall. lants, regardl	ost be

13

Samn	lina	Point:	
Sallip	Pillin	FOIL.	

nches)	Color	(moist)	%	Color	(mois	Redox Fe	-	ype <sup>1</sup>	Loc2		Texture	Remarks
0-7	10YR	5 / 4	98	7.5YR	5 /	8	2	С	PL	Loam	y Sand	
7-13	10YR	4 / 1	95 7	.5YR	6 /	8	5	С	PL	Silty (	Clay Loam	
												2.000
e: C=Co	ncentration	, D=Depleti	on, RM=Red	uced M	latrix,	CS=Cove	ered or	Coated	Sand Gr	ains.	*Location: PL=Pore	Lining, M=Matrix.
dric Soi	Indicator	s: (Applica	ble to all LF	RRs, ur	nless	otherwis	e note	i.)			Indicators for Pro	blematic Hydric Soils <sup>3</sup> :
Histisol	(A1)			- 0	Poly	alue Belo	w Surf	ace (S8	) (LRR S	T, U)	1 cm Muck (A9	(LRR O)
Histic E	pipedon (A	2)			Thin	Dark Surf	ace (S	(LRR	, S, T, U)		2 cm Muck (A1	0) (LRR S)
Black H	listic (A3)			_	Loan	y Mucky	Minera	(F1) (L	RR 0)		Reduced Vertice	(F18) (outside MLRA 150A,B)
Hydrog	en Sulfide (	A4)			Loan	y Gleyed	Matrix	(F2)			Piedmont Floor	dplain Soils (F19) (LRR P, S, T)
Stratifie	d Layers (A	N5)		_X	Depl	eted Matri	x (F3)				Anomalous Bri	ght Loamy Soils (F20)
Organic	Bodies (A	6) (LRR P,	T, U)		Redo	x Dark Si	urface (	F6)			(MLRA 153B)	
5 cm M	ucky Miner	al (A7) (LRF	R P, T, U)	0	Depl	eted Dark	Surfac	e (F7)			Red Parent Ma	terial (TF2)
Muck P	resence (A	8) (LRR U)			Redo	x Depres	sions (F	-8)			Very Shallow D	ark Surface (TF12)
	uck (A9) (L				Marl	(F10) (LR	R U)				Other (Explain	
		ark Suface (	(A11)		Depl	eted Ochr	ic (F11)	(MLRA	151)		19-14	-
Thick D	ark Surface	e (A12)			Iron-	Mangane:	se Mass	ses (F1	2) (LRR (	), P, T)	3Indicators of h	vdrophytic vegetation and
Coast F	rairie Redo	x (A16) (ML	-RA 150A)		Umb	ic Surfac	e (F13)	(LRR F	, T, U)			ogy must be present,
Sandy I	Mucky Mine	eral (S1) (LF	RR O, S)		Delta	Ochric (F	17) <b>(M</b>	LRA 15	1)			d or problematic.
	Sleyed Mat				Redu	ced Verti	c (F18)	(MLRA	150A, 1	50B)		
Sandy I	Redox (S5)					nont Floo						
	Matrix (Se			_							49A, 153C, 153D)	
Dark Su	rface (S7)	(LRR P, S,	T, U)								**************************************	
strictive	Laver (if o	observed):										1000
Туре:	N/A	250				26						
Depth (ir	nches): N	/A							Hydric s	oil prese	ent? Yes _	X No
marks:	1984											

Project/Site: Harbor Island		City/County: Nue	ece County	Sampling Date:	March 19, 2019
Applicant/Owner: POCCA		0.000	State: TX	Sampling Point:	14
Investigator(s): Ashley Bogran	nd, Orlando Recio	Section, Townshi	p, Range: None		
Landform (hillslope, terrace, etc.)	: Prairie	Local relief (cond	ave, convex, none): None	e Slope	: (%): <b>0</b>
Subregion (LRR or MLRA): LRR	T Lat:	27.84776900			m: NAD83
Soil Map Unit Name: Mustang F				VI classification:	
Are climatic / hydrologic condition	ns on the site typical for this ti	me of the year? Yes	There are a second seco	the same and the same	
THE CONTRACT OF THE PROPERTY O	, or Hydrologysig				
	, or Hydrologyna				
7. HPAS					
SUMMARY OF FINDINGS	- Attach site map sho	wing sampling pol	nt locations, transe	cts, important fe	atures, etc.
I bedeen bedee Versetellen Dessen		194			
Hydrophytic Vegetation Presen		Is the Sami	oled Area within a		
Hydric Soil Present?	Yes X No	Wetland?		es No	X
Wetland Hydrology Present?	Yes No	X			
Remarks:					
HYDROLOGY					
Wetland Hydrology Indicators	ı:	182,018(1-182-18	Second	ary Indicators (minimu	ım of two required)
Primary Indicators (minimum of	one is required; check all that	t apply)	Sui	rface Soil Cracks (B6)	
Surface Water (A1)	Aqu	atic Fauna (B13)	Spa	arsely Vegetated Cond	cave Surface (B8)
High Water Table (A2)	Marl	Deposits (B15) (LRR U)	Dra	ainage Patterns (B10)	
Saturation (A3)	Hydr	ogen Sulfide Odor (C1)	Mo	ss Trim Lines (B16)	
Water Marks (B1)	Oxic	ized Rhizospheres on Liv	ing Roots (C3) Dry	-Season Water Table	(C2)
Sediment Deposits (B2)	Pres	ence of Reduced Iron (C-	4) Cra	ayfish Burrows (C8)	
Drift Deposits (B3)	Rec	ent Iron Reduction in Tille	d Soils (C6) Sat	turation Visible on Aer	ial Imagery (C9)
Algal Mat or Crust (B4)	Thin	Muck Surface (C7)	Ge	omorphic Position (D2	2)
Iron Deposits (B5)	Othe	er (Explain in Remarks)	Sha	allow Aquitard (D3)	
Inundation Visible on Aeria	I Imagery (B7)		FA	C-Neutral Test (D5)	
Water-Stained Leaves (B9	)		Spi	hagnum moss (D8) (L	RR T, U)
Field Observations:			T		
Surface water present?	Yes No_X De	pth (inches):			
Water table present?	Yes No X De				
Saturation present?	Yes No X De	10 000 000 000	Wetland Hydrology	Present? Yes	No. X
(includes capillary fringe)					
Describe Recorded Data (stream	m gauge, monitoring well, aer	ial photos, previous inspe	ections), if available:		
Remarks:					
×					

	ATION (Four Strata) - Use scientific na	illes oi pia	1113		\$		No. of Contrast of	
		Absolute	Dominant	Indicator	Dominance Test v	worksheet:		
	Stratum (Plot Size: 30')	% Cover	Species?	Status	Number of Domina			
1 _	None				That Are OBL, FAC	CW, or FAC:	0	(A
2 _	100 manner salven er er mille to was a dealer er				Total Number of Do	ominant		
3 _	The second secon				Species Across all	Strata: _	2	(B
١ _	200				Percent of Domina	nt Species that		
<u> </u>					are OBL, FACW, o	r FAC:	0.00%	(A
ì _	- 1000					2000		
, _					Prevalence Index	worksheet		
_					Total % Cove	er of: M	ultiply by:	
		0	= Total Cover		OBL species	3 x 1 =	3	
	50% of total cover: 0	20%	of total cover:	0	FACW species	0 x2=	0	
apli	iing/Shrub Stratum (Plot Size: 15' )	8			FAC species	0 x 3 =	0	
	None				FACU species	83 × 4 =	332	
					UPL species		150	
	77.00				Column totals	116 (A)	485	(B
	The second of th				-			
-					Prevalence	ce Index = B/A =	4.	18
-	000000				Hydrophytic Vege			
-	1100 CO (0.0100)				1 -Rapid Test f	or Hydrophytic V	egetation	
<u> </u>		-			2 - Dominance		<b>3</b> 2	
1			= Total Cover		3 - Prevalence			
	50% of total cover: 0		of total cover:			drophytic Veget	ation <sup>1</sup> (Evola	ain\
	Stratum (Plot Size: 5' )  Cynodon dactylon	75	Y	FACU	<sup>1</sup> Indicators of hydrid			must be
: - : -	Cynodon dactylon Coreopsis basalis Erigeron pulchellus	30 5	Y	FACU UPL FACU OBL	present, unless disc Definitions of Fou Tree - Woody plant	turbed or problem r Vegetation St ts, excluding vine	rata: es 3 in. (7.6	cm) or
· - · - · -	Cynodon dactylon Coreopsis basalis Erigeron pulchellus Eleocharis tuberculosa	30 5 3	N N	UPL FACU	present, unless dist Definitions of Fou Tree - Woody plant more in diameter a	turbed or problem r Vegetation St ts, excluding vine	rata: es 3 in. (7.6	cm) or
	Cynodon dactylon Coreopsis basalis Erigeron pulchellus Eleocharis tuberculosa Polygala polygama	30 5 3 3	N N N	UPL FACU OBL	present, unless disc Definitions of Fou Tree - Woody plant	turbed or problem r Vegetation St ts, excluding vine	rata: es 3 in. (7.6	cm) or
	Cynodon dactylon Coreopsis basalis Erigeron pulchellus Eleocharis tuberculosa Polygala polygama	30 5 3 3	N N N	OBL FACU	present, unless dis Definitions of Fou Tree - Woody plant more in diameter a height. Sapling/shrub - W	turbed or problem ir Vegetation St ts, excluding vine t breast height (I loody plants, exc	matic. rata: es 3 in. (7.6 DBH), regard	cm) or dless of
	Cynodon dactylon Coreopsis basalis Erigeron pulchellus Eleocharis tuberculosa Polygala polygama	30 5 3 3	N N N	OBL FACU	present, unless dis Definitions of Fou Tree - Woody plan more in diameter a height.	turbed or problem ir Vegetation St ts, excluding vine t breast height (I loody plants, exc	matic. rata: es 3 in. (7.6 DBH), regard	cm) or dless of
2 - 3	Cynodon dactylon Coreopsis basalis Erigeron pulchellus Eleocharis tuberculosa Polygala polygama	30 5 3 3	N N N	OBL FACU	present, unless districted by the present, unless districted by the present of th	turbed or problem Ir Vegetation St ts, excluding vine t breast height (I loody plants, excluder than 3.28 ft (bus (non-woody)	matic. rata: es 3 in. (7.6 DBH), regard cluding vines 1 m) tall. plants, rega	cm) or dless of
	Cynodon dactylon Coreopsis basalis Erigeron pulchellus Eleocharis tuberculosa Polygala polygama	30 5 3 3	N N N	OBL FACU	present, unless distributions of Fouritions of Fouritree - Woody plant more in diameter a height.  Sapling/shrub - Walin DBH and greater the street of the s	turbed or problem Ir Vegetation St ts, excluding vine t breast height (I loody plants, excluder than 3.28 ft (bus (non-woody)	matic. rata: es 3 in. (7.6 DBH), regard cluding vines 1 m) tall. plants, rega	cm) or dless of
	Cynodon dactylon Coreopsis basalis Erigeron pulchellus Eleocharis tuberculosa Polygala polygama	30 5 3 3	Y N N N	OBL FACU	present, unless districted by the present of the pr	turbed or problem vegetation St ts, excluding vine t breast height (I doody plants, excluter than 3.28 ft (bus (non-woody) ants less than 3.	matic. rata: es 3 in. (7.6 ob) DBH), regard cluding vines 1 m) tall. plants, rega	cm) or dless of i, less th
2 - 3 - 4 - 5 - 5 - 6 - 1 -	Cynodon dactylon Coreopsis basalis Erigeron pulchellus Eleocharis tuberculosa Polygala polygama	30 5 3 3	Y N N N	OBL FACU	present, unless districted by the present, unless districted by the present of th	turbed or problem vegetation St ts, excluding vine t breast height (I doody plants, excluter than 3.28 ft (bus (non-woody) ants less than 3.	matic. rata: es 3 in. (7.6 ob) DBH), regard cluding vines 1 m) tall. plants, rega	cm) or dless of s, less th
3 - 3 - 3 - 3 - 3 - 1 - 1 - 1	Cynodon dactylon Coreopsis basalis Erigeron pulchellus Eleocharis tuberculosa Polygala polygama	30 5 3 3	N N N	UPL FACU OBL FACU	present, unless districted by the present of the pr	turbed or problem vegetation St ts, excluding vine t breast height (I doody plants, excluter than 3.28 ft (bus (non-woody) ants less than 3.	matic. rata: es 3 in. (7.6 ob) DBH), regard cluding vines 1 m) tall. plants, rega	cm) or dless of s, less th
2 - 3 - 4 - 5 - 5 - 6 - 1 -	Cynodon dactylon Coreopsis basalis Erigeron pulchellus Eleocharis tuberculosa Polygala polygama	30 5 3 3 3	Y N N N T T Total Cover	UPL FACU OBL FACU	present, unless districted by the present of the pr	turbed or problem vegetation St ts, excluding vine t breast height (I doody plants, excluter than 3.28 ft (bus (non-woody) ants less than 3.	matic. rata: es 3 in. (7.6 ob) DBH), regard cluding vines 1 m) tall. plants, rega	cm) or dless of s, less th
2 - 3 - 5 - 7 - 3 - 9 - 1 - 2 -	Cynodon dactylon Coreopsis basalis Erigeron pulchellus Eleocharis tuberculosa Polygala polygama  50% of total cover: 58	30 5 3 3 3	N N N	UPL FACU OBL FACU	present, unless districted by the present of the pr	turbed or problem vegetation St ts, excluding vine t breast height (I doody plants, excluter than 3.28 ft (bus (non-woody) ants less than 3.	matic. rata: es 3 in. (7.6 ob) DBH), regard cluding vines 1 m) tall. plants, rega	cm) or dless of s, less th
	Cynodon dactylon Coreopsis basalis Erigeron pulchellus Eleocharis tuberculosa Polygala polygama  50% of total cover: 58  dy Vine Stratum (Plot Size: 30' )	30 5 3 3 3	Y N N N = Total Cover	UPL FACU OBL FACU	present, unless districted by the present of the pr	turbed or problem vegetation St ts, excluding vine t breast height (I doody plants, excluter than 3.28 ft (bus (non-woody) ants less than 3.	matic. rata: es 3 in. (7.6 ob) DBH), regard cluding vines 1 m) tall. plants, rega	cm) or dless of s, less th
2 - 1 - 2 - 200 -	Cynodon dactylon Coreopsis basalis Erigeron pulchellus Eleocharis tuberculosa Polygala polygama  50% of total cover: 58  dy Vine Stratum (Plot Size: 30' )	30 5 3 3 3	Y N N N = Total Cover	UPL FACU OBL FACU	present, unless districted by the present of the pr	turbed or problem vegetation St ts, excluding vine t breast height (I doody plants, excluter than 3.28 ft (bus (non-woody) ants less than 3.	matic. rata: es 3 in. (7.6 ob) DBH), regard cluding vines 1 m) tall. plants, rega	cm) or dless of s, less th
2 - 3	Cynodon dactylon Coreopsis basalis Erigeron pulchellus Eleocharis tuberculosa Polygala polygama  50% of total cover: 58  dy Vine Stratum (Plot Size: 30' )  None	30 5 3 3 3	Y N N N = Total Cover	UPL FACU OBL FACU	present, unless districted by the present of the pr	turbed or problem vegetation St ts, excluding vine t breast height (I doody plants, excluter than 3.28 ft (bus (non-woody) ants less than 3.	matic. rata: es 3 in. (7.6 ob) DBH), regard cluding vines 1 m) tall. plants, rega	cm) or dless of i, less th
1 - 2 - 3 - 4 - 5 - 7 - 3 - 0 - 1 - 2 - 1 - 2 - 1 - 2 - 1 - 2 - 1 - 2 - 1 - 2 - 1 - 2 - 3 - 1 - 2 - 1 - 2 - 3 - 1 - 2 - 1 - 2 - 1 - 2 - 1 - 2 - 3 - 1 - 2 - 1 - 2 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3	Cynodon dactylon Coreopsis basalis Erigeron pulchellus Eleocharis tuberculosa Polygala polygama  50% of total cover: 58 dy Vine Stratum (Plot Size: 30' ) None	30 5 3 3 3	Y N N N = Total Cover	UPL FACU OBL FACU	present, unless districted by the present of the pr	turbed or problem vegetation St ts, excluding vine t breast height (I doody plants, excluter than 3.28 ft (bus (non-woody) ants less than 3.	matic. rata: es 3 in. (7.6 ob) DBH), regard cluding vines 1 m) tall. plants, rega	cm) or dless of i, less th
2 - 3	Cynodon dactylon Coreopsis basalis Erigeron pulchellus Eleocharis tuberculosa Polygala polygama  50% of total cover: 58  dy Vine Stratum (Plot Size: 30' )  None	30 5 3 3 3	Y N N N = Total Cover	UPL FACU OBL FACU	present, unless districted by the present of the pr	turbed or problem vegetation St ts, excluding vine t breast height (I doody plants, excluter than 3.28 ft (bus (non-woody) ants less than 3.	matic. rata: es 3 in. (7.6 ob) DBH), regard cluding vines 1 m) tall. plants, rega	cm) or dless of s, less th
12 3 4 5 6 7 9 1 2 1 2 1 2	Cynodon dactylon Coreopsis basalis Erigeron pulchellus Eleocharis tuberculosa Polygala polygama  50% of total cover: 58 dy Vine Stratum (Plot Size: 30' ) None	30 5 3 3 3	N N N N	UPL FACU OBL FACU	present, unless districted by the present of the pr	turbed or problem vegetation St ts, excluding vine t breast height (I doody plants, excluter than 3.28 ft (bus (non-woody) ants less than 3.	matic. rata: es 3 in. (7.6 ob) DBH), regard cluding vines 1 m) tall. plants, rega	cm) or dless of i, less th
1 _ 2 _ 3 _ 4 _ 5 _ 6 _ 7 _ 8 _ 9 _ 10 _ 11 _ 12 Voo	Cynodon dactylon Coreopsis basalis Erigeron pulchellus Eleocharis tuberculosa Polygala polygama  50% of total cover: 58 dy Vine Stratum (Plot Size: 30' ) None		Y N N N  Total Cover of total cover:	UPL FACU OBL FACU	present, unless districted by the present of the pr	turbed or problem Vegetation States, excluding vine to breast height (Indoody plants, excluter than 3.28 ft (industrial (indus	matic. rata: es 3 in. (7.6 ob) DBH), regard cluding vines 1 m) tall. plants, rega	cm) or dless of i, less th ardless o

SOIL

iches)	Color	Matrix (moist)	%	Color	(moist)	K Feature	Type <sup>1</sup>	Loc2	Te	kture		Remarks
0-8	10YR	5 / 4	98	7.5YR	4 / 6	2	C	PL	Loamy S			Kemarks
8-15	10YR	7 / 1		7.5YR	6 / 8	1	c	PL	Loamy S			
	-							_				
					Matrix, CS=C			d Sand Gra		cation: PL=Por		M=Matrix. c Hydric Soils³:
Histisol	(A1)				Polyvalue l	Below Su	urface (S	8) (LRR S	T, U)	1 cm Muck (A	(9) <b>(LRR C</b>	))
Histic E	pipedon (A	2)		_	Thin Dark	Surface (	(S9) (LRF	R, S, T, U)		2 cm Muck (A		
Hydrog Stratifie Organic		(5) 6) <b>(LRR P,</b> 1		<u>x</u>	Loamy Muc Loamy Gle Depleted M Redox Dark	yed Matr latrix (F3 k Surface	rix (F2) 3) e (F6)	LRR O)		Piedmont Flo Anomalous B (MLRA 153B	odplain So right Loam i)	
	-	al (A7) <b>(LRF</b>	? P, T, U)	_	Depleted D				_	Red Parent M	,	,
	resence (A				Redox Dep					Very Shallow		. ,
	uck (A9) (L		***	_	Marl (F10)				_	Other (Explain	n in Rema	rks)
Thick D Coast F Sandy I Sandy I Sandy I Stripped	ark Surface Prairie Redo Mucky Mine Gleyed Mat Redox (S5) d Matrix (S6	ox (A16) <b>(ML</b> eral (S1) <b>(LR</b> rix (S4)	.RA 150A) R O, S)		Depleted Of Iron-Manga Umbric Sur Delta Ochri Reduced V Piedmont F Anomalous	nese Ma face (F1 c (F17) ( ertic (F1	asses (F1 3) (LRR I MLRA 1: 8) (MLRA n Soils (F	2) (LRR ( P, T, U) 51) A 150A, 18 (19) (MLR	60B) A 149A)	<sup>3</sup> Indicators of wetland hydro unless disturb	ology must	
	Layer (if o		1, 0)									
Type:	N/A							Undria a	ail measant?	Vez	v	N.S
Depth (ir	icnes). N	/A						nyaric s	oil present?	Yes	X	No

Project/Site: Harbor Island	C	ity/County: Nuece Coun	ty	Sampling Date:	March 19, 2019
Applicant/Owner: POCCA		8 3552	State: TX	Sampling Point:	15
Investigator(s): Ashley Bogrand, Orlando Recid	Se Se	ection, Township, Range:	None		
Landform (hillslope, terrace, etc.): Prairie		ocal relief (concave, conv	/ex, none): None	Slope	(%): 0
Subregion (LRR or MLRA): LRR T	Lat: 27.84717	100 L	.ong: <u>-97.069007</u>	Datu	m: <b>NAD83</b>
Soil Map Unit Name: Mustang Fine Sand, 0 to 1	percent		NW	I classification:	
Are climatic / hydrologic conditions on the site typic	al for this time of the	year? Yes X	No (If n	o, explain in Remark	s.)
Are vegetation, Soil, or Hydrology	significantly	disturbed? Are "r	normal circumstan	ces" present? Ye	s X No
Are vegetation, Soil, or Hydrology					
SUMMARY OF FINDINGS – Attach site	map showing sa	ampling point locat	ions, transec	ts, important fea	atures, etc.
534 SACT SACT STATE	NoX	Is the Sampled Area	within a		100400 ********
Hydric Soil Present? Yes	NoX	Wetland?		s No	X
Wetland Hydrology Present? Yes	X No	20.000000000000000000000000000000000000		Note the second of the second	
Remarks:					
HYDROLOGY					
Wetland Hydrology Indicators:			102800	ry Indicators (minimu	
Primary Indicators (minimum of one is required; of				ace Soil Cracks (B6)	
Surface Water (A1)	Aquatic Fauna	alle a libraria a como		rsely Vegetated Cond	cave Surface (B8)
High Water Table (A2)		(B15) (LRR U)	and and	nage Patterns (B10)	
Saturation (A3)	Hydrogen Sulf	ide Odor (C1)	Mos	s Trim Lines (B16)	
X Water Marks (B1)	I FOREST COMPANY AND COMPANY	ospheres on Living Roots	(C3) _ Dry-	Season Water Table	(C2)
Sediment Deposits (B2)		educed Iron (C4)		fish Burrows (C8)	
Drift Deposits (B3)		eduction in Tilled Soils (C		ration Visible on Aer	
X Algal Mat or Crust (B4)	Thin Muck Sur	CONTRACTOR		morphic Position (D2	2)
Iron Deposits (B5)	Other (Explain	in Remarks)	(B. 16	low Aquitard (D3)	
Inundation Visible on Aerial Imagery (B7)			FAC	-Neutral Test (D5)	
Water-Stained Leaves (B9)			Spha	agnum moss (D8) (L	RR T, U)
Field Observations:					1700000
Surface water present? Yes N	o X Depth (inche	s):			
[4] [4] [4] [4] [4] [4] [4] [4] [4] [4]	O X Depth (inche	and the second s			
(includes capillary fringe)	o X Depth (inche		and Hydrology P	resent? Yes	X No
Describe Recorded Data (stream gauge, monitori	ng well, aerial photos	, previous inspections), if	favailable:		
Remarks:					

1878	Absolute	Dominant	Indicator	Dominance Test worksheet:		
Tree Stratum         (Plot Size:	% Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
2				Total Number of Dominant		
3				Species Across all Strata:		(B)
5				Percent of Dominant Species that are OBL, FACW, or FAC:	0.00%	(A/I
6						
7				Prevalence Index worksheet		
					ly by:	
	0	= Total Cove		OBL species 1 x1=		
50% of total cover: 0		of total cover:		FACW species 0 x 2 =		
apliing/Shrub Stratum (Plot Size: 15'	.)			FAC species x 3 =		
				FACU species 25 x 4 =		
				UPL species 0 x 5 =	W. W.	/D)
1				Column totals(A)	101	(B)
				Prevalence Index = B/A =	3.88	
				Hydrophytic Vegetation Indicators:		
				1 -Rapid Test for Hydrophytic Veget	tation	
3				2 - Dominance Test is >50%		
**************************************	0	= Total Cove	r	3 - Prevalence Index is ≤3.0 <sup>1</sup>		
	20%	of total cover:	0	Problematic Hydrophytic Vegetation	<sup>1</sup> (Explain)	
50% of total cover: 0						
erb Stratum (Plot Size: 5' )			FACU	<sup>1</sup> Indicators of hydric soil and wetland hydric	drology must	be
erb Stratum (Plot Size: 5' )  1 Carex nigromarginata	25	Y		<sup>1</sup> Indicators of hydric soil and wetland hydric soil and hydric soil a		be
lerb Stratum (Plot Size: 5' )  1 Carex nigromarginata  2 Eleocharis tuberculosa	25 1	<u>Y</u> N		- 1997 PROTEIN (1997年 1997年	D	be
erb Stratum (Plot Size: 5' )  1 Carex nigromarginata 2 Eleocharis tuberculosa 3		YN	OBL	present, unless disturbed or problematic  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3	in. (7.6 cm) c	r
lerb Stratum (Plot Size: 5' )  1	25 1	Y 	OBL	present, unless disturbed or problematic  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH)	in. (7.6 cm) c	r
lerb Stratum (Plot Size: 5' )  1	25 1	Y N	OBL	present, unless disturbed or problematic  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3	in. (7.6 cm) c	r
erb Stratum (Plot Size: 5' )  1	25 1	Y N	OBL	present, unless disturbed or problematic  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH) height.  Sapling/shrub - Woody plants, excludir	in. (7.6 cm) c ), regardless	r of
erb Stratum (Plot Size: 5' )  1	25 1	Y N	OBL	Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH) height.	in. (7.6 cm) c ), regardless	r of
erb Stratum (Plot Size: 5' )  1	25 1	Y N	OBL	present, unless disturbed or problematic  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH) height.  Sapling/shrub - Woody plants, excludir	in. (7.6 cm) c ), regardless ng vines, less tall.	r of tha
erb Stratum (Plot Size: 5' )  1		Y N	OBL	present, unless disturbed or problematic  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH) height.  Sapling/shrub - Woody plants, excluding 3 in. DBH and greater than 3.28 ft (1 m)	in. (7.6 cm) c ), regardless ing vines, less tall.	r of tha
erb Stratum (Plot Size: 5' )  1		Y N	OBL	present, unless disturbed or problematic  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH) height.  Sapling/shrub - Woody plants, excluding 3 in. DBH and greater than 3.28 ft (1 m)  Herb - All herbaceous (non-woody) plants.	in. (7.6 cm) c ), regardless ing vines, less tall. its, regardles tall.	r of the
erb Stratum (Plot Size: 5' )  1		Y N	OBL	present, unless disturbed or problematic  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH) height.  Sapling/shrub - Woody plants, excluding 3 in. DBH and greater than 3.28 ft (1 m)  Herb - All herbaceous (non-woody) plant size, and woody plants less than 3.28 ft	in. (7.6 cm) c ), regardless ing vines, less tall. its, regardles tall.	r of the
lerb Stratum (Plot Size: 5' )  1		Y N	OBL	present, unless disturbed or problematic  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH) height.  Sapling/shrub - Woody plants, excluding 3 in. DBH and greater than 3.28 ft (1 m)  Herb - All herbaceous (non-woody) plant size, and woody plants less than 3.28 ft  Woody vines - All woody vines greater	in. (7.6 cm) c ), regardless ing vines, less tall. its, regardles tall.	r of the
lerb Stratum (Plot Size: 5' )  1		Y 	OBL	present, unless disturbed or problematic  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH) height.  Sapling/shrub - Woody plants, excluding 3 in. DBH and greater than 3.28 ft (1 m)  Herb - All herbaceous (non-woody) plant size, and woody plants less than 3.28 ft  Woody vines - All woody vines greater	in. (7.6 cm) c ), regardless ing vines, less tall. its, regardles tall.	r of tha
		N N = Total Cove	OBL	present, unless disturbed or problematic  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH) height.  Sapling/shrub - Woody plants, excluding 3 in. DBH and greater than 3.28 ft (1 m)  Herb - All herbaceous (non-woody) plant size, and woody plants less than 3.28 ft  Woody vines - All woody vines greater	in. (7.6 cm) c ), regardless ing vines, less tall. its, regardles tall.	r of tha
Stratum   (Plot Size:   5'   )		N N = Total Cove	OBL	present, unless disturbed or problematic  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH) height.  Sapling/shrub - Woody plants, excluding 3 in. DBH and greater than 3.28 ft (1 m)  Herb - All herbaceous (non-woody) plant size, and woody plants less than 3.28 ft  Woody vines - All woody vines greater	in. (7.6 cm) c ), regardless ing vines, less tall. its, regardles tall.	r of tha
Carex nigromarginata   Carex nigromarginata   Eleocharis tuberculosa   Carex nigromarginata   Carex nigromargina	25 1	N N = Total Cove	OBL	present, unless disturbed or problematic  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH) height.  Sapling/shrub - Woody plants, excluding 3 in. DBH and greater than 3.28 ft (1 m)  Herb - All herbaceous (non-woody) plant size, and woody plants less than 3.28 ft  Woody vines - All woody vines greater	in. (7.6 cm) c ), regardless ing vines, less tall. its, regardles tall.	r of the
	25 1	N N = Total Cove	OBL	present, unless disturbed or problematic  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH) height.  Sapling/shrub - Woody plants, excluding 3 in. DBH and greater than 3.28 ft (1 m)  Herb - All herbaceous (non-woody) plant size, and woody plants less than 3.28 ft  Woody vines - All woody vines greater	in. (7.6 cm) c ), regardless ing vines, less tall. its, regardles tall.	r of tha
	25 1	N N = Total Cove	OBL	present, unless disturbed or problematic  Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH) height.  Sapling/shrub - Woody plants, excluding 3 in. DBH and greater than 3.28 ft (1 m)  Herb - All herbaceous (non-woody) plant size, and woody plants less than 3.28 ft  Woody vines - All woody vines greater	in. (7.6 cm) c ), regardless ing vines, less tall. its, regardles tall.	r of tha
	25 1	N N = Total Cove	OBL	Definitions of Four Vegetation Strata: Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH) height.  Sapling/shrub - Woody plants, excluding 3 in. DBH and greater than 3.28 ft (1 m) Herb - All herbaceous (non-woody) plansize, and woody plants less than 3.28 ft Woody vines - All woody vines greater height.	in. (7.6 cm) c ), regardless ing vines, less tall. its, regardles tall.	r of tha
	25 1	N N = Total Cove	OBL	Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH) height.  Sapling/shrub - Woody plants, excluding 3 in. DBH and greater than 3.28 ft (1 m)  Herb - All herbaceous (non-woody) plansize, and woody plants less than 3.28 ft  Woody vines - All woody vines greater height.	in. (7.6 cm) c ), regardless ing vines, less tall. its, regardles tall.	r of tha
	25 1	= Total Cover	OBL	Definitions of Four Vegetation Strata:  Tree - Woody plants, excluding vines 3 more in diameter at breast height (DBH) height.  Sapling/shrub - Woody plants, excluding 3 in. DBH and greater than 3.28 ft (1 m)  Herb - All herbaceous (non-woody) plansize, and woody plants less than 3.28 ft  Woody vines - All woody vines greater height.  Hydrophytic vegetation	in. (7.6 cm) c ), regardless ing vines, less tall. its, regardles tall.	r of tha

Sampling Point:

15

15

SOIL

Sampling Point:

ydric Soil Histisol ( Histic Ep	10YR	(moist) 4 / 3	99		(moist) 5 / 8	1	Type¹ C	Loc2 PL	Texture Loamy Sand	Remarks
pe: C=Con ydric Soil Histisol (,		473		7.5TK	3 / 6			FL.	Loamy Sand	
dric Soil Histisol ( Histic Ep										
dric Soil Histisol ( Histic Ep	and the state of									
dric Soil Histisol ( Histic Ep	controtion				9W					
Histisol (A	-	, D=Depletio						Sand Gra		PL=Pore Lining, M=Matrix.
Histic Ep	Indicator	s: (Applicat	ble to all l	RRs, u	nless othe	rwise no	ted.)		Indicator	s for Problematic Hydric Soils <sup>3</sup> :
	(A1)				Polyvalue	Below S	urface (S	B) (LRR S	, T, U) 1 cm l	Muck (A9) (LRR 0)
Dlack His	pipedon (A	2)		_	Thin Dark	Surface	(S9) (LRF	R, S, T, U)	2 cm	Muck (A10) (LRR S)
DIACK FILE	stic (A3)			_	Loamy Mo	ucky Mine	eral (F1) (	LRR O)	Reduc	ced Vertic (F18) (outside MLRA 150A,
Hydroger	n Sulfide (	A4)		_	Loamy Gl	eyed Mat	trix (F2)		Piedm	nont Floodplain Soils (F19) (LRR P, S,
Stratified	d Layers (A	(5)		_	Depleted	Matrix (F	3)		Anom	alous Bright Loamy Soils (F20)
Organic I	Bodies (A	6) <b>(LRR P, T</b>	, U)		Redox Da	ırk Surfac	ce (F6)		(MLR	(A 153B)
5 cm Mu	icky Minera	al (A7) <b>(LRR</b>	P, T, U)	_	Depleted	Dark Sur	face (F7)		_	arent Material (TF2)
Muck Pre	esence (A	B) (LRR U)		_	Redox De		' '		Very S	Shallow Dark Surface (TF12)
1 cm Mu	ick (A9) <b>(L</b>	RR P, T)			Marl (F10		-		Other	(Explain in Remarks)
Depleted	Below Da	ark Suface (A	A11)	_	Depleted	Ochric (F	11) <b>(MLR</b>	A 151)		
Thick Da	ark Surface	(A12)		_	Iron-Mang				D, P, T) <sup>3</sup> Indica	ators of hydrophytic vegetation and
Coast Pr	rairie Redo	x (A16) (ML	RA 150A)	_	Umbric St	urface (F	13) (LRR	P, T, U)		nd hydrology must be present,
Sandy M	lucky Mine	ral (S1) (LRI	R O, S)		Delta Och	ric (F17)	(MLRA 1	51)	unless	s disturbed or problematic.
Sandy G	ileyed Mat	rix (S4)		_		,	, .	A 150A, 1	,	
Sandy R	edox (S5)			_				19) <b>(MLR</b>		
	Matrix (S6				Anomalou	is Bright	Loamy So	ils (F20) <b>(</b>	MLRA 149A, 153C,	153D)
		(LRR P, S, T	r, U)		-					
		bserved):								
Type: I Depth (inc	N/A	/A						Hydric s	oil present?	Yes No _ X _
Deptil (inc	Ciles). 14	<u> </u>						riyano s	on presenti	103
emarks:										

Project/Site: Harbor Island		City	/County: Nuece	County	Sampling Date:	March 19, 2019
Applicant/Owner: POCCA			S 60 m	State: TX		
Investigator(s): Ashley Bogra	nd, Orlando Recio	Sect	tion, Township, F	Range: None	- Carren Office - Core	
Landform (hillslope, terrace, etc.	): Prairie	Loc	al relief (concave	e, convex, none): No	one Slope	(%): <b>0</b>
Subregion (LRR or MLRA): LRR	T L	at: 27.8469720	0	Long: -97.0700	Datu	m: NAD83
Soil Map Unit Name: Mustang	Fine Sand, 0 to 1 percent				NWI classification:	
Are climatic / hydrologic conditio	ns on the site typical for thi	s time of the ye	ar? Yes _	X No (	If no, explain in Remark	s.)
Are vegetation, Soil	, ar Hydrology	significantly dis	sturbed?	Are "normal circums	stances" present? Ye	s X No
	, or Hydrology					
SUMMARY OF FINDINGS	6 – Attach site map s	howing san	npling point	locations, trans	ects, important fe	atures, etc.
Hydrophytic Vegetation Presen	it? YesN	10 <u>X</u>	le the Sample	d Area within a		
Hydric Soil Present?	YesN	lo <u>X</u>	Wetland?		Yes No	x
Wetland Hydrology Present?	YesN	lo X				
Remarks:						
HYDROLOGY						
Wetland Hydrology Indicators	s:			Secon	ndary Indicators (minimu	m of two required)
Primary Indicators (minimum o	f one is required; check all	that apply)		s	Surface Soil Cracks (B6)	
Surface Water (A1)	_ ^	Aquatic Fauna (E	313)	_ 8	Sparsely Vegetated Cond	cave Surface (B8)
— High Water Table (A2)	_ ^	Marl Deposits (B	15) (LRR U)	[	Prainage Patterns (B10)	
Saturation (A3)	_ +	lydrogen Sulfide	e Odor (C1)	N	Moss Trim Lines (B16)	
Water Marks (B1)	_ 0	xidized Rhizosp	oheres on Living	Roots (C3) _ C	Ory-Season Water Table	(C2)
Sediment Deposits (B2)	F	resence of Red	luced Iron (C4)	0	Crayfish Burrows (C8)	
<ul><li>Drift Deposits (B3)</li></ul>	_ F	Recent Iron Red	uction in Tilled S	oils (C6) — S	Saturation Visible on Aer	al Imagery (C9)
Algal Mat or Crust (B4)	_	hin Muck Surfa	LENGTH CHILDREN	G	Seomorphic Position (D2	.)
Iron Deposits (B5)		other (Explain in	Remarks)	_ s	Shallow Aquitard (D3)	
Inundation Visible on Aeria				, — ·	AC-Neutral Test (D5)	
Water-Stained Leaves (B9	)			s	Sphagnum moss (D8) (L	RR T, U)
Field Observations:						
Surface water present?	Yes No_X					
Vater table present?	Yes No X					
Saturation present? includes capillary fringe)	Yes No_X	Depth (inches):		Wetland Hydrolog	y Present? Yes_	NoX
Describe Recorded Data (strea	m gauge, monitoring well.	aerial photos, p	revious inspection	ons), if available:	-000	
Remarks:						112-00 112-112-112-112-112-112-112-112-112-112

	) - Use scientific n	ames of pla	ints		Sampling Point: _	16
	12725 50	Absolute	Dominant	Indicator	Dominance Test worksheet:	
ree Stratum (Plot Size:	30' )	% Cover	Species?	Status	Number of Dominant Species	91 mm
1 None	10.500				That Are OBL, FACW, or FAC:	(A)
2					Total Number of Dominant	
3					Species Across all Strata:	(B)
4					Percent of Dominant Species that	
5					are OBL, FACW, or FAC:	0.00% (A/E
6				edeciments flutter armer	·	201 201
7					Prevalence Index worksheet	
8					Total % Cover of: Multi	ply by:
ř.			= Total Cove		OBL species 0 x 1 =	
50%	of total cover:0		of total cover:		FACW species 0 x2=	
			of total cover.		FAC species 0 x3 =	
Sapliing/Shrub Stratum (Plot 1 <b>None</b>	Size				FACU species 105 x 4 =	
		100	B125747 = 110)	VI TOTAL	Marine S	
2					UPL species15 x 5 =	
3					Column totals 120 (A)	495 (B)
4					V200 05 CALLERY CO.	
5	× 40	_			Prevalence Index = B/A =	4.13
6					Hydrophytic Vegetation Indicators:	
7					1 -Rapid Test for Hydrophytic Veg	etation
8					2 - Dominance Test is >50%	
		0	= Total Cove	г	3 - Prevalence Index is ≤3.0 <sup>1</sup>	
50%	of total cover: 0	20%	of total cover:	0	Problematic Hydrophytic Vegetation	n <sup>1</sup> (Explain)
Herb Stratum (Plot Size:	and the state of t					
1 Cynodon dactylon	· · · · · · · · · · · · · · · · · · ·	90	Υ	FACU	<sup>1</sup> Indicators of hydric soil and wetland h	vdrology must be
2 Sisyrinchium langloisi	i	10	N	UPL	present, unless disturbed or problemat	
3 Nothoscordum bivalve		5	N	FACU	Definitions of Four Vegetation Strate	a:
4 Gaillardia pulchella	<del>in miles and a second a second and a second a second and a second and a second and a second and a second and</del>	5	N	UPL	Tree - Woody plants, excluding vines	3 in. (7.6 cm) or
5 Anagallis arvensis			N	FACU	more in diameter at breast height (DBI	H), regardless of
Mary Annual Committee and Mary and Committee Committee and					height.	
			N	FACU	Sapling/shrub - Woody plants, exclud	ing vines, less tha
					3 in. DBH and greater than 3.28 ft (1 n	
8		_			1	
9					Herb - All herbaceous (non-woody) pla size, and woody plants less than 3.28	2000 W. T
10					Size, and woody plants less than 3.20	ic com.
11					Woody vines - All woody vines greate	r than 3.28 ft in
12					height.	
		120	= Total Cove	r		50 West
50%	of total cover: 60	20%	of total cover.	24		
	Size:)				1	
1 None						
_					1	
3			-		1	
					1	
4					1	
	****				Hydrophytic	
5		0	= Total Cove	r	vegetation	
5	of total cover: 0		of total cover:		present? Yes	300

pth Matrix	Redox Features	
ches) Color (moist) % (	Color (moist) % Type <sup>1</sup> Loc2	Texture Remarks
0-16 10YR 5 / 4 100	/ Loan	ny Sand
	ed Matrix, CS=Covered or Coated Sand Grains.	<sup>2</sup> Location: PL=Pore Lining, M=Matrix.  Indicators for Problematic Hydric Soils <sup>3</sup> :  1 cm Muck (A9) (LRR O) 2 cm Muck (A10) (LRR S) Reduced Vertic (F18) (outside MLRA 150A,E 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) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
		•
Dark Surface (S7) (LRR P, S, T, U)  strictive Layer (if observed):  Type: N/A		х.
Depth (inches): N/A	Hydric soil pres	sent? Yes NoX

Project/Site: Harbor Island	City	//County: Nuece Co	unty	Sampling Date:	March 19, 2019
Applicant/Owner: POCCA		X (185.	State: TX	Sampling Point:	17
Investigator(s): Ashley Bogrand, Orlando Recio	Sec	tion, Township, Rang	je: None		
Landform (hillslope, terrace, etc.): Prairie	Loc	cal relief (concave, co	nvex, none): None	Slope	(%): 0
Subregion (LRR or MLRA): LRR T	Lat: 27.8466020	00	Long: -97.069393	B Datu	m: NAD83
Soil Map Unit Name: Mustang Fine Sand, 0 to 1 percen	nt	-	NV	VI classification:	
Are climatic / hydrologic conditions on the site typical for t	his time of the ye	ear? Yes X			
Are vegetation, Soil, or Hydrology	significantly di	sturbed? Are	"normal circumstar	nces" present? Ye	s X No
Are vegetation, Soil, or Hydrology					
SUMMARY OF FINDINGS – Attach site map					
Hydrophytic Vegetation Present? Yes	No X	Is the Sampled Ar	no within a		*15.00°
Hydric Soil Present? Yes	No X	Wetland?		sNo	x
Wetland Hydrology Present? Yes	No X	· · · · · · · · · · · · · · · · · · ·			
Remarks:					
HYDROLOGY					
Wetland Hydrology Indicators:			Seconda	ry Indicators (minimu	m of two required)
Primary Indicators (minimum of one is required; check a	all that apply)		Surf	face Soil Cracks (B6)	
Surface Water (A1)	Aquatic Fauna (	B13)	Spa	rsely Vegetated Cond	cave Surface (B8)
High Water Table (A2)	Marl Deposits (E	315) (LRR U)		inage Patterns (B10)	
Saturation (A3)	Hydrogen Sulfid	e Odor (C1)	— Mos	s Trim Lines (B16)	
Water Marks (B1)	Oxidized Rhizos	pheres on Living Roo	ots (C3) Dry-	Season Water Table	(C2)
Sediment Deposits (B2)	Presence of Rec	duced Iron (C4)	Cray	yfish Burrows (C8)	
Drift Deposits (B3)	Recent Iron Rec	luction in Tilled Soils	(C6) Sati	uration Visible on Aer	al Imagery (C9)
Algal Mat or Crust (B4)	Thin Muck Surfa	ice (C7)		morphic Position (D2	
Iron Deposits (B5)	Other (Explain in	Remarks)	Sha	llow Aquitard (D3)	
Inundation Visible on Aerial Imagery (B7)			FAC	C-Neutral Test (D5)	
Water-Stained Leaves (B9)			Sph	agnum moss (D8) (LI	RR T, U)
ield Observations:	99			977 33 14	
Surface water present? Yes No X	Depth (inches)	:			
Vater table present? Yes No X	Depth (inches)				
Saturation present? Yes No _X	Depth (inches)	: We	tland Hydrology P	resent? Yes	No X
(includes capillary fringe)	0 1000 1100 110				1000000
Describe Recorded Data (stream gauge, monitoring well	I, aerial photos, p	previous inspections)	, if available:		
Remarks:					

ווייים ון אוסוו או בו	Strata) - Use s	Olon Italio i	iairies oi pia	21 110				_		
	02		Absolute	Dominant	Indicator	Dominance Test	worksheet:	:		
ree Stratum (Plot	Size: 30'	)	% Cover	Species?	Status	Number of Domin	nant Species			
1 None						That Are OBL, FA	ACW, or FAC	):	1	_ (A)
2						Total Number of I	Dominant			
α.						Species Across a	III Strata:		2	_ (B)
4						Percent of Domin	ant Species	that		
-						are OBL, FACW,			50.00%	(A/E
www.				1.5		Prevalence Inde	x workshee	t		
8						Total % Cov	ver of:	Multi	ply by:	
5510			0	= Total Cover		OBL species	0	x1=_	0	
	50% of total cov	ver: 0	20%	of total cover:	0	FACW species	0	x 2 =	0	
apliing/Shrub Stratum				37.55		FAC species		x 3 =		_
P P P P P P P P P P P P P P P P P P P						FACU species				_
	h-d-c-					UPL species		x 5 =		
						Column totals	- 105am	(A)	500 Sept.	— (B)
500								V 9		_ (_)
				-		Dravata	nce Index =	R/A =	3.75	į
	->					Hydrophytic Veg			5.75	
									otation	
			74		- STEELING OF	1 -Rapid Test			etation	
ju-								0%		
ju-								Committee of the Commit		
ju-	50V 5			= Total Cover		3 - Prevalenc	æ Index is ≤3	3.0 <sup>1</sup>	-1 <i>(</i> =-1-:-)	
3	50% of total cov			= Total Cover of total cover:			æ Index is ≤3	3.0 <sup>1</sup>	on <sup>1</sup> (Explain)	)
erb Stratum (Plot	Size: 5'					3 - Prevalenc	ce Index is ≤3 Hydrophytic \	3.0 <sup>1</sup> Vegetatio		
erb Stratum (Plot	Size: 5'				0 FAC	3 - Prevalence Problematic H	e Index is ≤3 Hydrophytic \ Iric soil and w	3.0 <sup>1</sup> Vegetation	ydrology mi	
erb Stratum (Plot Andropogon ge	Size: 5'	)	20%	of total cover:	0	3 - Prevalence Problematic F  Indicators of hyd present, unless di	æ Index is ≤3 Hydrophytic \ Iric soil and w isturbed or p	3.0 <sup>1</sup> Vegetation Vetland heroblemate	ydrology mi	
erb Stratum (Plot Andropogon ge Dalea purpurea	Size: 5'		20% 60 30	of total cover:	0 FAC	3 - Prevalence Problematic I  Indicators of hyd present, unless di  Definitions of Fo	te Index is <3 Hydrophytic \ Iric soil and w isturbed or p our Vegetation	Vegetation  Vegetation  vetland heroblemate	nydrology mi tic. a:	ust be
erb Stratum (Plot Andropogon ge Dalea purpurea Verbena officin	Size: 5' erardii n		20% 60 30 5	of total cover:	0 FAC UPL	3 - Prevalence Problematic I  Indicators of hyd present, unless di Definitions of Fo	the Index is <3 Hydrophytic \ Inic soil and w isturbed or pour Vegetation ants, excluding	vetland herobleman	nydrology mittic. a: 3 in. (7.6 cm	ust be
erb Stratum (Plot Andropogon ge Dalea purpurea Verbena officin Gaillardia pulci	Size: 5' erardii n		20% 60 30 5 5	of total cover.	FAC UPL FACU UPL	3 - Prevalence Problematic I  Indicators of hyd present, unless di  Definitions of Fo	the Index is <3 Hydrophytic \ Inic soil and w isturbed or pour Vegetation ants, excluding	vetland herobleman	nydrology mittic. a: 3 in. (7.6 cm	ust be
erb Stratum (Plot Andropogon ge Dalea purpurea Verbena officin Gaillardia pulci	Size: 5' erardii elalis hella	)	20% 60 30 5 5	of total cover.	FAC UPL FACU UPL	3 - Prevalence Problematic I  Indicators of hyd present, unless di  Definitions of Formation Tree - Woody pla more in diameter height.	be Index is sale Hydrophytic \ Hydrophytic \ Hric soil and w isturbed or p  Four Vegetation on the control of the late of the	Vegetation  Vegetation  Vegetation  Vetland h  roblemat  on Strata  ng vines s  ight (DBI	nydrology mi tic. a: 3 in. (7.6 cm H), regardle:	n) or
erb Stratum (Plot Andropogon ge Dalea purpurea Verbena officin Gaillardia pulci	Size: 5' erardii elerardis hella		20% 60 30 5 5	of total cover.	FAC UPL FACU UPL	3 - Prevalence Problematic I  Indicators of hyd present, unless di  Definitions of Formation Tree - Woody pla more in diameter height.  Sapling/shrub - V	be Index is sale Hydrophytic \ Hydrophytic \ Hric soil and w isturbed or p our Vegetation at breast he he woody plant	wetland h roblemat on Strata g vines ; ight (DBI	nydrology mitic.  a: 3 in. (7.6 cm H), regardle:	n) or
erb Stratum (Plot Andropogon ge Dalea purpurea Verbena officin Gaillardia pulci	Size: 5' erardii n nalis hella		20% 60 30 5 5	of total cover:	FAC UPL FACU UPL	3 - Prevalence Problematic I  Indicators of hyd present, unless di  Definitions of Formation Tree - Woody pla more in diameter height.	be Index is sale Hydrophytic \ Hydrophytic \ Hric soil and w isturbed or p our Vegetation at breast he he woody plant	wetland h roblemat on Strata g vines ; ight (DBI	nydrology mitic.  a: 3 in. (7.6 cm H), regardle:	n) or
erb Stratum (Plot Andropogon ge Dalea purpurea Verbena officin Gaillardia pulci	Size: 5' erardii e nalis hella		20% 60 30 5 5	of total cover:	FAC UPL FACU UPL	3 - Prevalence Problematic H  Indicators of hyd present, unless di Definitions of Formatic Fo	the Index is \$23 Hydrophytic \ Inic soil and weisturbed or pour Vegetation at breast heim to the soil and the sater than 3.2 Hydrophytics and the sater than 3.2 Hydrophytics are soil of the sa	vetland h roblemal on Strata ng vines i ight (DBI s, exclud 28 ft (1 m	nydrology mitic.  a: 3 in. (7.6 cm H), regardle: ling vines, le n) tall.  ants, regardl	n) or ss of
erb Stratum (Plot Andropogon ge Dalea purpurea Verbena officin Gaillardia pulci	Size: 5' erardii e ealis hella		20% 60 30 5 5	of total cover:	FAC UPL FACU UPL	3 - Prevalence Problematic H  Indicators of hyd present, unless di Definitions of Formatic Tree - Woody pla more in diameter height.  Sapling/shrub - 1 3 in. DBH and green	the Index is \$3.25 Hydrophytic \ Inic soil and weisturbed or pour Vegetation at breast heim to the soil and the sater than 3.25 eous (non-weight index).	vetland h roblemal on Strata ng vines i ight (DBI s, exclud 28 ft (1 m	nydrology mitic.  a: 3 in. (7.6 cm H), regardle: ling vines, le n) tall.  ants, regardl	n) or ss of
erb Stratum (Plot Andropogon ge Dalea purpurea Verbena officin Gaillardia pulci	Size: 5' erardii eleanis hella		20% 60 30 5 5	of total cover.	FAC UPL FACU UPL	3 - Prevalence Problematic H  Indicators of hyd present, unless di  Definitions of Formatic Holling Problematic Holling Proble	the Index is \$\frac{1}{2}\$  Hydrophytic \  Iric soil and weisturbed or pour Vegetation  ants, excluding at breast height beater than 3.3  eous (non-weighlants less the)	vetland h roblemat on Strata g vines : ight (DBI s, exclud 28 ft (1 m	a: 3 in. (7.6 cm H), regardle: ling vines, le n) tall. ants, regardl	n) or ss of ess tha
erb Stratum (Plot Andropogon ge Dalea purpurea Verbena officin Gaillardia pulci	Size: 5' erardii n nalis hella		20% 60 30 5 5	of total cover.	FAC UPL FACU UPL	3 - Prevalence Problematic H  Indicators of hyd present, unless di Definitions of Formatic Fo	the Index is \$\frac{1}{2}\$  Hydrophytic \  Iric soil and weisturbed or pour Vegetation  ants, excluding at breast height beater than 3.3  eous (non-weighlants less the)	vetland h roblemat on Strata g vines : ight (DBI s, exclud 28 ft (1 m	a: 3 in. (7.6 cm H), regardle: ling vines, le n) tall. ants, regardl	n) or ss of ess tha
erb Stratum (Plot Andropogon ge Dalea purpurea Verbena officin Gaillardia pulci	Size: 5' erardii n nalis hella		20%  60 30 5 5	of total cover:	FACUUPLUPLUPL	3 - Prevalence Problematic H  Indicators of hyd present, unless di  Definitions of Formatic H  Tree - Woody pla more in diameter height.  Sapling/shrub - N 3 in. DBH and green Herb - All herback size, and woody properties of the problematic height.	the Index is \$\frac{1}{2}\$  Hydrophytic \  Iric soil and weisturbed or pour Vegetation  ants, excluding at breast height beater than 3.3  eous (non-weighlants less the)	vetland h roblemat on Strata g vines : ight (DBI s, exclud 28 ft (1 m	a: 3 in. (7.6 cm H), regardle: ling vines, le n) tall. ants, regardl	n) or ss of ess tha
erb Stratum (Plot Andropogon ge Dalea purpurea Verbena officin Gaillardia pulci	Size: 5' erardii e ealis hella		20% 60 30 5 5	of total cover:  Y Y N N = Total Cover	FACUUPLUPL	3 - Prevalence Problematic H  Indicators of hyd present, unless di  Definitions of Formatic H  Tree - Woody pla more in diameter height.  Sapling/shrub - N 3 in. DBH and green Herb - All herback size, and woody properties of the problematic height.	the Index is \$\frac{1}{2}\$  Hydrophytic \  Iric soil and weisturbed or pour Vegetation  ants, excluding at breast height beater than 3.3  eous (non-weighlants less the)	vetland h roblemat on Strata g vines : ight (DBI s, exclud 28 ft (1 m	a: 3 in. (7.6 cm H), regardle: ling vines, le n) tall. ants, regardl	n) or ss of ess tha
erb Stratum (Plot Andropogon ge Dalea purpurea Verbena officin Gaillardia pulci	Size: 5' erardii nalis hella 50% of total con	ver:	20% 60 30 5 5	of total cover:	FACUUPLUPL	3 - Prevalence Problematic H  Indicators of hyd present, unless di  Definitions of Formatic H  Tree - Woody pla more in diameter height.  Sapling/shrub - N 3 in. DBH and green Herb - All herback size, and woody properties of the problematic height.	the Index is \$\frac{1}{2}\$  Hydrophytic \  Iric soil and weisturbed or pour Vegetation  ants, excluding at breast height beater than 3.3  eous (non-weighlants less the)	vetland h roblemat on Strata g vines : ight (DBI s, exclud 28 ft (1 m	a: 3 in. (7.6 cm H), regardle: ling vines, le n) tall. ants, regardl	n) or ss of ess tha
erb Stratum (Plot Andropogon ge Dalea purpurea Verbena officin Gaillardia pulci	Size: 5' erardii e ealis hella	ver:	20% 60 30 5 5	of total cover:  Y Y N N = Total Cover	FACUUPLUPL	3 - Prevalence Problematic H  Indicators of hyd present, unless di  Definitions of Formatic H  Tree - Woody pla more in diameter height.  Sapling/shrub - N 3 in. DBH and green Herb - All herback size, and woody properties of the problematic height.	the Index is \$\frac{1}{2}\$  Hydrophytic \  Iric soil and weisturbed or pour Vegetation  ants, excluding at breast height beater than 3.3  eous (non-weighlants less the)	vetland h roblemat on Strata g vines : ight (DBI s, exclud 28 ft (1 m	a: 3 in. (7.6 cm H), regardle: ling vines, le n) tall. ants, regardl	n) or ss of ess tha
erb Stratum (Plot Andropogon ge Dalea purpurea Verbena officin Gaillardia pulci  1 1 2 2 2 3 3 4 5 6 7 7 8 8 9 9 9 1 1 2 2 2 3 3 4 5 7 7 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Size: 5' erardii elalis hella  50% of total cov (Plot Size:	ver:	20% 60 30 5 5	of total cover:  Y Y N N = Total Cover	FACUUPLUPL	3 - Prevalence Problematic H  Indicators of hyd present, unless di  Definitions of Formatic H  Tree - Woody pla more in diameter height.  Sapling/shrub - N 3 in. DBH and green Herb - All herback size, and woody properties of the problematic height.	the Index is \$\frac{1}{2}\$  Hydrophytic \  Iric soil and weisturbed or pour Vegetation  ants, excluding at breast height beater than 3.3  eous (non-weighlants less the)	vetland h roblemat on Strata g vines : ight (DBI s, exclud 28 ft (1 m	a: 3 in. (7.6 cm H), regardle: ling vines, le n) tall. ants, regardl	n) or ss of ess tha
erb Stratum (Plot Andropogon ge Dalea purpurea Verbena officin Gaillardia pulci  1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Size: 5' erardii nalis hella 50% of total con	ver:	20% 60 30 5 5	of total cover:  Y Y N N = Total Cover	FACUUPLUPL	3 - Prevalence Problematic H  Indicators of hyd present, unless di  Definitions of Formatic H  Tree - Woody pla more in diameter height.  Sapling/shrub - N 3 in. DBH and green Herb - All herback size, and woody properties of the problematic height.	the Index is \$\frac{1}{2}\$  Hydrophytic \  Iric soil and weisturbed or pour Vegetation  ants, excluding at breast height because the least of the le	vetland h roblemat on Strata g vines : ight (DBI s, exclud 28 ft (1 m	a: 3 in. (7.6 cm H), regardle: ling vines, le n) tall. ants, regardl	n) or ss of ess tha
erb Stratum (Plot Andropogon ge Dalea purpurea Verbena officin Gaillardia pulci  1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Size: 5' erardii elalis hella  50% of total cov (Plot Size:	ver:	20% 60 30 5 5	of total cover:  Y Y N N = Total Cover	FACUUPLUPL	3 - Prevalence Problematic H  Indicators of hyd present, unless di  Definitions of Formatic H  Tree - Woody pla more in diameter height.  Sapling/shrub - N 3 in. DBH and green Herb - All herback size, and woody properties of the problematic height.	the Index is \$\frac{1}{2}\$  Hydrophytic \  Iric soil and weisturbed or pour Vegetation  ants, excluding at breast height because the least of the le	vetland h roblemat on Strata g vines : ight (DBI s, exclud 28 ft (1 m	a: 3 in. (7.6 cm H), regardle: ling vines, le n) tall. ants, regardl	n) or ss of ess tha
erb Stratum (Plot Andropogon ge Dalea purpurea Verbena officin Gaillardia pulci Gaillardia pulci  1 2 Voody Vine Stratum None	Size: 5' erardii elalis hella  50% of total cov (Plot Size:	ver:50	20% 60 30 5 5 5	of total cover:  Y Y N N = Total Cover	FACUUPLUPL	3 - Prevalence Problematic H  Indicators of hyd present, unless di  Definitions of Formatic H  Tree - Woody pla more in diameter height.  Sapling/shrub - N 3 in. DBH and green Herb - All herback size, and woody properties of the problematic height.	the Index is \$\frac{1}{2}\$  Hydrophytic \  Iric soil and weisturbed or pour Vegetation  ants, excluding at breast height because the least of the le	vetland h roblemat on Strata g vines : ight (DBI s, exclud 28 ft (1 m	a: 3 in. (7.6 cm H), regardle: ling vines, le n) tall. ants, regardl	n) or ss of ess tha
lerb Stratum (Plot Andropogon ge Dalea purpurea Verbena officin Gaillardia pulci  Base of the stratum None  None	Size: 5' erardii nalis hella  50% of total cov (Plot Size:	ver:50	20% 60 30 5 5 5	of total cover:  Y Y N N = Total Cover	FACUUPLUPL	3 - Prevalence Problematic H  Indicators of hyd present, unless di Definitions of Formation Tree - Woody pla more in diameter height.  Sapling/shrub - Valid and green the size, and woody green the size of the s	the Index is \$\frac{1}{2}\$  Hydrophytic \  Iric soil and weisturbed or pour Vegetation  ants, excluding at breast height because the least of the le	vetland h roblemat on Strata g vines : ight (DBI s, exclud 28 ft (1 m	a: 3 in. (7.6 cm H), regardle: ling vines, le n) tall. ants, regardl	n) or ss of ess tha
lerb Stratum (Plot Andropogon ge Dalea purpurea Verbena officin Gaillardia pulci  Research None None	Size: 5' erardii nalis hella  50% of total cov (Plot Size:	ver:50	20% 60 30 5 5 5	of total cover:  Y N N  Total Cover of total cover:	FAC UPL FACU UPL	3 - Prevalence Problematic H  Indicators of hyd present, unless di Definitions of Fore - Woody pla more in diameter height.  Sapling/shrub - Vallence in the problematic in the problema	the Index is \$\frac{1}{2}\$  Hydrophytic \  Iric soil and weisturbed or pour Vegetation  ants, excluding at breast height because the least of the le	vetland h roblemat on Strata g vines : ight (DBI s, exclud 28 ft (1 m	a: 3 in. (7.6 cm H), regardle: ling vines, le n) tall. ants, regardl	n) or ss of ess tha
8   Stratum (Plot   Andropogon ge   Dalea purpurea   Verbena officin   Gaillardia pulci   S   S   S   S   S   S   S   S   S	Size: 5' erardii nalis hella  50% of total cov (Plot Size:	ver:	20% 60 30 5 5	of total cover:  Y Y N N   Total Cover of total cover:	FAC UPL FACU UPL	3 - Prevalence Problematic H  Indicators of hyd present, unless di Definitions of Formation Tree - Woody pla more in diameter height.  Sapling/shrub - Valid and green the size, and woody green the size of the s	the Index is \$\frac{1}{2}\$  Hydrophytic \  Inic soil and weisturbed or pour Vegetation ants, excluding at breast heid  Woody plants eater than 3.3  eous (non-we) plants less the lill woody vine	vetland h roblemal on Strata ng vines s ight (DBI s, exclud 28 ft (1 m oody) pla ian 3.28	a: 3 in. (7.6 cm H), regardle: ling vines, le n) tall. ants, regardl	n) or ss of ess tha

SOIL

IL							Sampling Point:	17	
rofile Des	scription: (Describe	to the dep	oth needed to docu	ment the	e indicato	r or confirm	the absence of indicators.)		
epth	Matrix		Redo	ox Featu	res				
nches)	Color (maist)	%	Color (maist)	%	Type <sup>1</sup>	Loc2	Texture	Remarks	

	0-16 10YR 5 / 4 99 7	Color (moist) % Type <sup>1</sup>	Loc2	Texture Remarks
Adric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histisol (A1)		.5YR 5 / 8 1 C	PL Loam	y Sand
dric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histisol (A1)				
dric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histisol (A1)				
Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histisol (A1)				
Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histisol (A1)				
Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histisol (A1)	e: C=Concentration, D=Depletion, RM=Redu	uced Matrix, CS=Covered or Coate	d Sand Grains.	<sup>2</sup> Location: PL=Pore Lining, M=Matrix.
Histic Epipedon (A2)  Black Histic (A3)  Black Histic (A3)  Loamy Mucky Mineral (F1) (LRR O)  Reduced Vertic (F18) (outside MLRA 150A, 150A)  Hydrogen Sulfide (A4)  Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Mucky Mineral (A7) (LRR P, T, U)  Depleted Dark Surface (F7)  Redox Depressions (F8)  Coast Prairie Redox (A16)  Sandy Mucky Mineral (S1) (LRR O, S)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Depleted Ochric (F11) (MLRA 151)  Depleted Ochric (F17) (MLRA 151)  Peldmont Floodplain Soils (F19) (LRR O, P, T)  Delta Ochric (F17) (MLRA 151)  Peldmont Floodplain Soils (F19) (LRR O, P, T)  Thick Dark Surface (A12)  Coast Prairie Redox (A16) (MLRA 150A)  Sandy Mucky Mineral (S1) (LRR O, S)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Dark Surface (S7) (LRR P, S, T, U)  Peldmont Floodplain Soils (F20)  Hydric soil present?  Yes  No  X	dric Soil Indicators: (Applicable to all LR	Rs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A, Piedmont Floodplain Soils (F19) (LRR P, S, Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Redox Depressions (F8)  1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) 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) Delta Ochric (F18) (MLRA 150A) Depleted Natrix (S6) Dark Surface (S7) (LRR P, S, T, U) Strictive Layer (if observed): Type: N/A  Loamy Mucky Mineral (F1) (LRR O, S) Delta Ochric (F17) (MLRA 150P) Piedmont Floodplain Soils (F20) Mutrix (F2) Piedmont Floodplain Soils (F19) (MLRA 149A, 153C, 153D) Reduced Vertic (F18) (MLRA 149A, 153C, 153D) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D)  Reduced Vertic (F18) (MLRA 150R) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D)  Hydric soil present?  Yes No X	Histisol (A1)	Polyvalue Below Surface (S	88) (LRR S, T, U)	1 cm Muck (A9) (LRR O)
Hydrogen Sulfide (A4)  Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Organic Bodies (A6) (LRR P, T, U)  Scr Mucky Mineral (A7) (LRR P, T, U)  Depleted Dark Surface (F6)  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)  Depleted Dark Surface (A12)  Endmont Floodplain Soils (F19) (LRR O, P, T)  Delta Ochric (F17) (MLRA 150A)  Marl (F10) (LRR U)  Delta Ochric (F11) (MLRA 151)  Reduced Vertic (F13) (LRR P, T, U)  Delta Ochric (F17) (MLRA 150A)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Strictive Layer (if observed):  Type: N/A  Depth (inches): N/A  Piedmont Floodplain Soils (F20)  (MLRA 153B)  Red Parent Material (TF2)  Wery Shallow Dark Surface (F12)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless	Histic Epipedon (A2)	Thin Dark Surface (S9) (LR	R, S, T, U)	2 cm Muck (A10) (LRR S)
Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  Sem Mucky Mineral (A7) (LRR P, T, U)  Depleted Dark Surface (F6)  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)  Sandy Redox (S5)  Depleted Matrix (F3)  Redox Dark Surface (F7)  Redox Depressions (F8)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)  Other (Explain in Remarks)  Poelta Ochric (F11) (MLRA 151)  Iron-Manganese Masses (F12) (LRR O, P, T)  Sandy Mucky Mineral (S1) (LRR O, S)  Sandy Mucky Mineral (S1) (LRR O, S)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Nark Surface (S7) (LRR P, S, T, U)  Strictive Layer (if observed):  Type: N/A  Depth (inches): N/A  Hydric soil present?  Yes  No X	Black Histic (A3)	Loamy Mucky Mineral (F1)	(LRR O)	Reduced Vertic (F18) (outside MLRA 150A,E
Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) (MLRA 153B)  5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2)  Muck Presence (A8) (LRR U) Redox Depressions (F8) Very Shallow Dark Surface (TF12)  1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Other (Explain in Remarks)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Wetland hydrology must be present, unless disturbed or problematic.  Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 150A) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Reduced Vertic (F18) (MLRA 150A, 150B)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Hydric soil present? Yes No X	Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		Piedmont Floodplain Soils (F19) (LRR P, S, T
5 cm Mucky Mineral (A7) (LRR P, T, U)  Muck Presence (A8) (LRR U)  1 cm Muck (A9) (LRR P, T)  Depleted Below Dark Suface (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)  Sandy Redox (S5)  Dark Surface (S7) (LRR P, T, U)  Depleted Dark Surface (F11) (MLRA 151)  Tron-Manganese Masses (F12) (LRR O, P, T)  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)  Anomalous Bright Loamy Soils (P20) (MLRA 149A, 153C, 153D)  Type: N/A  Depth (inches): N/A  Hydric soil present?  Yes No X	Stratified Layers (A5)	<b>—</b>		_
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)  Pietrictive Layer (if observed):  Type: N/A  Depth (inches): N/A  Marl (F10) (LRR U)  Depleted Depressions (F8)  Marl (F10) (LRR U)  Other (Explain in Remarks)  Iron-Manganese Masses (F12) (LRR O, P, T)  Wetland hydrology must be present, unless disturbed or problematic.  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  No Explain in Remarks)  Iron-Manganese Masses (F12) (LRR O, P, T)  Wetland hydrology must be present, unless disturbed or problematic.  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  No Explain in Remarks)  Iron-Manganese Masses (F12) (LRR O, P, T)  Wetland hydrology must be present, unless disturbed or problematic.  No Explain in Remarks)  Iron-Manganese Masses (F12) (LRR O, P, T)  Wetland hydrology must be present, unless disturbed or problematic.  No Explain in Remarks)	Organic Bodies (A6) (LRR P, T, U)			
1 cm Muck (A9) (LRR P, T)  Depleted Below Dark Suface (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)  Sandy Redox (S5)  Dark Surface (S7) (LRR P, S, T, U)  Strictive Layer (if observed):  Type: N/A  Depth (inches): N/A  Marl (F10) (LRR U)  Depleted Ochric (F10) (MLRA U)  Depleted Ochric (F11) (MLRA 151)  Iron-Manganese Masses (F12) (LRR O, P, T)  Jepleted Ochric (F13) (LRR P, T, U)  wetland hydrology must be present, unless disturbed or problematic.  Pelta 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)  Hydric soil present?  Yes No X				* '
Depleted Below Dark Suface (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)  Sandy Redox (S5)  Dark Surface (S7) (LRR P, S, T, U)  Depleted Ochric (F17) (MLRA 151)  Depleted Ochric (F17) (MLRA 151)  Depleted Ochric (F13) (LRR P, T, U)  Wetland hydrology must be present, unless disturbed or problematic.  Reduced Vertic (F18) (MLRA 150A, 150B)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Strictive Layer (if observed):  Type: N/A  Depth (inches): N/A  Hydric soil present?  Yes  No X	, , , .	_		
Thick Dark Surface (A12)  Coast Prairie Redox (A16) (MLRA 150A)  Sandy Mucky Mineral (S1) (LRR O, S)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Sandy Redox (S5)  Dark Surface (S7) (LRR P, S, T, U)  Delta Ochric (F17) (MLRA 150A, 150B)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Strictive Layer (if observed):  Type: N/A  Depth (inches): N/A  Iron-Manganese Masses (F12) (LRR O, P, T)  January Gleyed Masses (F12) (LRR O, P, T)  January Gleyed Matrix (S4)  Reduced Vertic (F18) (MLRA 150A, 150B)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Hydric soil present?  Yes No X	, , , ,	_ , , , ,	DA 151\	Other (Explain in Remarks)
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)  Strictive Layer (if observed):  Type: N/A  Depth (inches): N/A  Umbric Surface (F13) (LRR P, T, U)  wetland hydrology must be present, unless disturbed or problematic.  Holling MLRA 151)  wetland hydrology must be present, unless disturbed or problematic.  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Hydric soil present?  Yes  No  X			,	3
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)  Strictive Layer (if observed):  Type: N/A  Depth (inches): N/A  Depth (inches): N/A  Depth (strictive Layer (S1) (LRR O, S)  Delta Ochric (F17) (MLRA 151)  Lunless disturbed or problematic.  Reduced Vertic (F18) (MLRA 150A, 150B)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Hydric soil present? Yes No X	, ,			
Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Strictive Layer (if observed):  Type: N/A  Depth (inches): N/A  Reduced Vertic (F18) (MLRA 150A, 150B)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Hydric soil present? Yes No X				, 3,
Sandy Redox (S5)	, , , , , , , , , , , , , , , , , , , ,	_		•
Dark Surface (S7) (LRR P, S, T, U)  strictive Layer (if observed):  Type: N/A  Depth (inches): N/A  Hydric soil present? Yes No X				
Strictive Layer (if observed):   Type: N/A	Stripped Matrix (S6)	Anomalous Bright Loamy S	oils (F20) (MLRA 14	49A, 153C, 153D)
Type:         N/A           Depth (inches):         N/A           Hydric soil present?         Yes           No         X	Dark Surface (S7) (LRR P, S, T, U)			
Depth (inches): N/A Hydric soil present? Yes No X	estrictive Layer (if observed):			
			Undria poli proce	was No. V
marks:	Depth (Inches): N/A		nyuric soil prese	ent? res No_X
	marks:			

Project/Site: Harbor Island	City/County: Nuece County Sampling Date: March 19, 2019
Applicant/Owner: POCCA	State: TX Sampling Point: 18
	Section, Township, Range: None
	Local relief (concave, convex, none): Concave Slope (%): 10-May
Subregion (LRR or MLRA): LRR T Lat: 27.846	The state of the s
Soil Map Unit Name: Mustang Fine Sand, 0 to 1 percent	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of the	
[18] [18] [18] [18] [18] [18] [18] [18]	tly disturbed? Are "normal circumstances" present? YesX No
	problematic? (If needed, explain any answers in Remarks.)
	sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area within a
Hydric Soil Present? Yes X No	
Wetland Hydrology Present? Yes X No	
Remarks:	<del>-</del> L
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply	
X Surface Water (A1) Aquatic Fau	500 St. Company of the Company of th
	ists (B15) (LRR U) Drainage Patterns (B10)
	Sulfide Odor (C1) Moss Trim Lines (B16)
	hizospheres on Living Roots (C3) Dry-Season Water Table (C2)
	of Reduced Iron (C4) Crayfish Burrows (C8)
	n Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
	Surface (C7) Geomorphic Position (D2)
	lain in Remarks) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)
Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)
Field Observations:	
Surface water present? Yes X No Depth (inc	ches):
Water table present? Yes No_X Depth (inc	
Saturation present? Yes X No Depth (includes capillary fringe)	10 1900 All
Describe Recorded Data (stream gauge, monitoring well, aerial pho	otos, previous inspections), if available:
Remarks:	

SETATION (Four Strata) - Use scientific	names of plants		Sampling Point: 1	8
		ninant Indicator	Dominance Test worksheet:	
(Plot Size: 30')	% Cover Spe	ecies? Status	Number of Dominant Species	
1 None			That Are OBL, FACW, or FAC: 2	(A)
2			Total Number of Dominant	
3		management to	Species Across all Strata: 2	(B)
4			Percent of Dominant Species that	
5			are OBL, FACW, or FAC: 100.00%	(A
6				
7			Prevalence Index worksheet	
8			Total % Cover of: Multiply by:	
7.55	<b>0</b> = Tot	tal Cover	OBL species 30 x 1 = 30	
50% of total cover: 0	20% of total	al cover: 0	FACW species 50 x 2 = 100	
apliing/Shrub Stratum (Plot Size: 15'			FAC species 0 x3 = 0	
1 None	MANA		FACU species 5 x 4 = 20	
			UPL species 0 x 5 = 0	_
			Column totals 85 (A) 150	— (B
			Column totals (A)	(0
4			Developed In the DM -	•
			Prevalence Index = B/A = 1.79  Hydrophytic Vegetation Indicators:	0
7			1 -Rapid Test for Hydrophytic Vegetation	
			X 2 - Dominance Test is >50%	
		tal Cover	X 3 - Prevalence Index is ≤3.0 <sup>1</sup>	
50% of total cover: 0	20% of tota	al cover: 0	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain	1)
erb Stratum (Plot Size: 5')				
Panicum repens	50	Y FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology m	iust be
Eleocharis tuberculosa	30	Y OBL	present, unless disturbed or problematic.	
Nothoscordum bivalve	5	N FACU	Definitions of Four Vegetation Strata:	
·			Tree - Woody plants, excluding vines 3 in. (7.6 cr	
5			more in diameter at breast height (DBH), regardle height.	ess of
5			neight.	
7			Sapling/shrub - Woody plants, excluding vines, I	ess th
			3 in. DBH and greater than 3.28 ft (1 m) tall.	
			Herb - All herbaceous (non-woody) plants, regard	lless o
0			size, and woody plants less than 3.28 ft tall.	
			1 858	
			Woody vines - All woody vines greater than 3.28 height.	πın
2			noight.	
	85 = Tot			
50% of total cover: 42.	20% of tota	l cover:17		
oody Vine Stratum (Plot Size: 30')				
None		255		
3				
20 2000				
5				
	0 = Tot	al Cover	Hydrophytic vegetation	
			i vegetation	
50% of total cover: 0	20% of tota	l cover: 0	present? Yes X No	

SOIL

Sampling Point:	18
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High and the second	cription: (Describe Matrix	to the depth r		ent the inc x Features	dicator	or confi	rm the absence of indicat	ors.)
Depth (inches)	Color (moist)	% (	Color (moist)		ype <sup>1</sup>	Loc2	Texture	Remarks
0-16	10YR 4 / 1		5YR 5 / 8	1	C	PL	Loamy Sand	Normania
	IOIN 471							7.7.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2
1								
172								
71 <del></del>								
							0	2000
	centration, D=Depleti					Sand Gra		e Lining, M=Matrix.
Hydric Soi	Indicators: (Applica	able to all LRF	Rs, unless other	wise noted	1.)		Indicators for Pr	oblematic Hydric Soils <sup>3</sup> :
Histisol	(A1)		Polyvalue B	Below Surfa	ace (S8)	(LRR S	T, U) 1 cm Muck (A	9) (LRR O)
Histic E	oipedon (A2)		Thin Dark	Surface (S9	) (LRR,	S, T, U)	2 cm Muck (A	10) (LRR S)
_	stic (A3)		Loamy Muc	cky Mineral	(F1) (LI	RR O)	Reduced Veri	tic (F18) (outside MLRA 150A,B)
	en Sulfide (A4)		Loamy Gle	yed Matrix	(F2)			odplain Soils (F19) (LRR P, S, T)
	d Layers (A5)		Depleted M	fatrix (F3)			Anomalous B	right Loamy Soils (F20)
	Bodies (A6) (LRR P,	T. U)	_	k Surface (I	F6)		(MLRA 153B	
	ucky Mineral (A7) (LRI		_	ark Surface			Red Parent M	•
	resence (A8) (LRR U)	.,,,,,,,		ressions (F	. ,		_	Dark Surface (TF12)
	ick (A9) (LRR P, T)		Marl (F10)		-,			n in Remarks)
_	d Below Dark Suface	(A11)	Depleted C		(MLRA	151)		,
	ark Surface (A12)	(****)	Iron-Manga	, ,	•		D. P. T) 3Indicators of	hudeenhutie vegetetien and
	rairie Redox (A16) (MI	LRA 150A)	_	face (F13)			Indicators of	hydrophytic vegetation and plogy must be present,
_	flucky Mineral (S1) (LF		Delta Ochri	, ,	,		•	ped or problematic.
_ ′	Gleyed Matrix (S4)	(1(0,0)	Reduced V					
	Redox (S5)		Piedmont F					
	Matrix (S6)		_				MLRA 149A, 153C, 153D)	
	rface (S7) ( <b>LRR P, S,</b>	T. 10.		, Diigiit Loa	any com	0 (. 20) (		
-	Layer (if observed):							
	N/A							
Depth (ir					- 1	Hydric s	oil present? Yes	No
Remarks:		000 M						
Nemarka.								
100 mg								

Project/Site: Harbor Island	City/County: Nuece	County	Sampling Date:	March 19, 2019
Applicant/Owner: POCCA		State: TX	Sampling Point:	19
Investigator(s): Ashley Bogrand, Orlando Recio	Section, Township, I	Range: None		
Landform (hillslope, terrace, etc.): Prairie	Local relief (concav	e, convex, none): None	Slope	e (%): <b>0</b>
Subregion (LRR or MLRA): LRR T Lat: 2	27.84627000	Long: -97.063546	Datu	m: NAD83
Soil Map Unit Name: Mustang Fine Sand, 0 to 1 percent		NW	/I classification:	
Are climatic / hydrologic conditions on the site typical for this time	e of the year? Yes	X No (If n	o, explain in Remark	s.)
Are vegetation, Soil, or Hydrology sign	ificantly disturbed?	Are "normal circumstar	nces" present? Ye	es X No
Are vegetation, Soil, or Hydrologynati	rally problematic?	(If needed, explain any	answers in Remarks	i.)
SUMMARY OF FINDINGS - Attach site map show	wing sampling point	locations, transec	ts, important fe	atures, etc.
Understation Property	<u>,                                    </u>			
Hydrophytic Vegetation Present? Yes No _	Is the Sample	d Area within a		
Hydric Soil Present? Yes No _	X Wetland?		s No	X
Wetland Hydrology Present? Yes No _	X			
Remarks:				
HYDROLOGY				
Wetland Hydrology Indicators:		Seconda	ry Indicators (minimu	ım of two required)
Primary Indicators (minimum of one is required; check all that	apply)	Surf	ace Soil Cracks (B6)	
Surface Water (A1) Aqua	tic Fauna (B13)	Spa	rsely Vegetated Con-	cave Surface (B8)
High Water Table (A2) Marl I	Deposits (B15) (LRR U)	Drai	nage Patterns (B10)	
Saturation (A3) Hydro	ogen Sulfide Odor (C1)	Mos	s Trim Lines (B16)	
Water Marks (B1) Oxidi:	zed Rhizospheres on Living	Roots (C3) Dry-	Season Water Table	(C2)
Sediment Deposits (B2) Prese	ence of Reduced Iron (C4)	Cray	fish Burrows (C8)	
Drift Deposits (B3)	nt Iron Reduction in Tilled S	Soils (C6) Satu	ration Visible on Aer	ial Imagery (C9)
Algal Mat or Crust (B4) Thin	Muck Surface (C7)	Geo	morphic Position (D2	2)
Iron Deposits (B5) Other	(Explain in Remarks)	Sha	llow Aquitard (D3)	
Inundation Visible on Aerial Imagery (B7)		FAC	-Neutral Test (D5)	
Water-Stained Leaves (B9)		Sph	agnum moss (D8) (L	RR T, U)
Field Observations:				
Surface water present? Yes No_X Dep		1		
Water table present? Yes No X Dep	th (inches):	1		
Saturation present? Yes No X Dep	th (inches):	Wetland Hydrology P	resent? Yes	NoX
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aeri.	al photos, previous inspecti	ions), if available:		
Describe Nessided Bala (or oan gaage, memering want as n	ar prioros, pro resus irrepress	,		
Remarks:		-		

		ui Otiata	) - Use s	cienui	ic nam	oo o, pio	nio -				19	
2	C	N + 0:-	201			Absolute	Dominant	Indicator	Dominance Test	worksheet:		
	Stratum (P	lot Size:	30'	)	_	% Cover	Species?	Status	Number of Domin			
1 -	None								That Are OBL, FA	CW, or FAC:	0	_ (A)
2 _									Total Number of D	Dominant		
3 _									Species Across al	I Strata:	1	_ (B)
4 _									Percent of Domina	ant Species that		
5 _									are OBL, FACW,	or FAC:	0.00%	_ (A/
6 _												
7 _									Prevalence Index	worksheet		
8 _									Total % Cov		ply by:	
					_	0	= Total Cover		OBL species	0 x 1 =	0	_
		50%	of total cov	ver:	0	20%	of total cover:	0	FACW species _	0 x 2 =	0	
apl	iing/Shrub Stra	tum_(Plot	Size:	15'	)				FAC species	x 3 =	0	
1 _	None						· · · · · · · · · · · · · · · · · · ·		FACU species	112 x 4 =	448	_
2 _									UPL species	2 x 5 =	10	_
3 _									Column totals	114 (A)	458	_ (B
	The state of the s									<del></del>	-X-20	
									Prevaler	nce Index = B/A =	4.02	9
5									Hydrophytic Veg	etation Indicators:		
7 -									1 -Rapid Test	for Hydrophytic Veg	etation	
- B										e Test is >50%		
						0	= Total Cover		3 - Prevalence	e Index is ≤3.0 <sup>1</sup>		
		50%	of total cov	/er	0 -		of total cover:			lydrophytic Vegetatio	on¹ (Explain)	,
larh	Stratum /D			VCI		20 /0	or total cover.			yaropriyao vegetade	on (Exploin)	<u>^</u>
		Int Size	5'	1								
	MATRICIA MAT		5'	)		0.5	V	FACIL	No diseases of bude	is sell and wetlend b	udeologu mu	int ha
1 _	Dichanthiun	n aristatum		)		95	Y	FACU		ric soil and wetland h		ust be
1 - 2 -	Dichanthiun Taraxacum	n aristatum officinale		)		10	N	FACU	present, unless di	sturbed or problema	tic.	ust be
1 _ 2 _ 3 _	Dichanthiun Taraxacum Anagallis ar	n aristatum officinale vensis	1			10 5	N N	FACU FACU	Definitions of Fo	sturbed or problematur Vegetation Strate	tic.	
1 - 2 - 3 - 4 -	Dichanthiun Taraxacum Anagallis ar Oenothera s	n aristatum officinale vensis speciosa	1			10 5 2	N N	FACU FACU UPL	present, unless dis Definitions of For Tree - Woody plan	sturbed or problema	tic. a: 3 in. (7.6 cm	ı) or
1 _ 2 _ 3 _ 4 _	Dichanthiun Taraxacum Anagallis ar	n aristatum officinale vensis speciosa	1			10 5 2	N N	FACU FACU	present, unless dis Definitions of For Tree - Woody plan	sturbed or problemateur Vegetation Strate nts, excluding vines	tic. a: 3 in. (7.6 cm	n) or
1 _ 2 _ 3 _ 4 _ 5 _	Dichanthium Taraxacum Anagallis ar Oenothera s Verbena offi	n aristatum officinale vensis speciosa icinalis	1			10 5 2 2	N N	FACU FACU UPL FACU	present, unless dis Definitions of For Tree - Woody plan more in diameter sheight.	sturbed or problema ur Vegetation Strata nts, excluding vines at breast height (DBI	a: 3 in. (7.6 cm H), regardles	ı) or ss of
1 - 2 - 3 - 4 - 5 - 6 - 7 -	Dichanthium Taraxacum Anagallis ar Oenothera s Verbena offi	n aristatum officinale vensis speciosa icinalis	1			10 5 2 2	N N N	FACU FACU UPL FACU	present, unless dis Definitions of For Tree - Woody plan more in diameter sheight. Sapling/shrub - V	sturbed or problemateur Vegetation Strate nts, excluding vines	a: 3 in. (7.6 cm H), regardles ling vines, le	ı) or ss of
1 _ 2 _ 3 _ 4 _ 5 _ 6 _ 7 _	Dichanthium Taraxacum Anagallis ar Oenothera s Verbena offi	n aristatum officinale vensis speciosa icinalis	1			10 5 2 2	N N N	FACU FACU UPL FACU	present, unless dis Definitions of Formatte - Woody plan more in diameter in height. Sapling/shrub - Walling - W	sturbed or problemal ur Vegetation Strata nts, excluding vines at breast height (DBI Woody plants, exclud- ater than 3.28 ft (1 n	a: 3 in. (7.6 cm H), regardles ling vines, le n) tall.	n) or ss of ess th
1 2 3 4 5 6 7 8	Dichanthium Taraxacum Anagallis ar Oenothera s Verbena offi	n aristatum officinale vensis speciosa icinalis	1			10 5 2 2	N N N	FACU FACU UPL FACU	present, unless dis Definitions of Formation of Formatio	sturbed or problemal ur Vegetation Strata nts, excluding vines at breast height (DBI Woody plants, exclud- ater than 3.28 ft (1 n	a: 3 in. (7.6 cm H), regardles ling vines, le 1) tall.	n) or ss of ess tha
1 - 2 - 3 - 4 - 5 - 6 - 7 - 9 - 0 -	Dichanthium Taraxacum Anagallis ar Oenothera s Verbena offi	n aristatum officinale vensis speciosa icinalis	1			10 5 2 2 2	N N N	FACU FACU UPL FACU	present, unless dis Definitions of Formation of Formatio	sturbed or problemal ur Vegetation Strata nts, excluding vines at breast height (DBI Woody plants, exclud- ater than 3.28 ft (1 n	a: 3 in. (7.6 cm H), regardles ling vines, le 1) tall.	n) or ss of ess tha
1 - 2 - 3 - 4 - 5 - 6 - 7 - 9 - 0 -	Dichanthium Taraxacum Anagallis ar Oenothera s Verbena offi	n aristatum officinale vensis speciosa icinalis	1			10 5 2 2 2	N N N	FACU FACU UPL FACU	present, unless dis Definitions of Formal Tree - Woody planted in diameter in height.  Sapling/shrub - Walling in DBH and green in diameter in diameter in height.  Sapling/shrub - Walling in DBH and green in diameter in diameter in height.	sturbed or problemal ur Vegetation Strata nts, excluding vines at breast height (DBI Woody plants, exclud- ater than 3.28 ft (1 n	a: 3 in. (7.6 cm H), regardles ling vines, le 1) tall. ants, regardle	n) or ss of ess the
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1 2 3 4 5 6 7 8 9 1 1 2	Dichanthium Taraxacum Anagallis ar Oenothera s Verbena offi	n aristatum officinale vensis speciosa icinalis	1	ver:		10 5 2 2 2	N N N	FACU UPL FACU	present, unless dis Definitions of Formal Tree - Woody planted in diameter in height.  Sapling/shrub - Walling in DBH and green in diameter in diameter in height.  Sapling/shrub - Walling in DBH and green in diameter in diameter in height.	sturbed or problemal ur Vegetation Strate nts, excluding vines at breast height (DBI Woody plants, exclud- ater than 3.28 ft (1 n	a: 3 in. (7.6 cm H), regardles ling vines, le 1) tall. ants, regardle	n) or ss of ess tha
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1 _ 2 _ 3 _ 3 _ 4 _ 5 _ 6 _ 7 _ 6 _ 9 _ 1 _ 2 \dots \dots 0 _ 1 _ 2 \dots 0 _ 2 _ 1 _ 2 \dots 0 _ 2 _ 1 _ 2 \dots 0 _ 2 _ 2 \dots 0 _ 2 _ 2 _ 2 \dots 0 _ 2 _ 2 _ 2 _ 2 _ 2 _ 2 _ 2 _ 2 _ 2 _	Dichanthium Taraxacum Anagallis ar Oenothera s Verbena offi	n aristatum officinale vensis speciosa icinalis 50% m (Plot	of total cov	ver:	57	10 5 2 2 2	N N N	FACU UPL FACU	present, unless dis Definitions of Formal Tree - Woody planted in diameter in height.  Sapling/shrub - Walling in DBH and green in diameter in diameter in height.  Sapling/shrub - Walling in DBH and green in diameter in diameter in height.	sturbed or problemal ur Vegetation Strate nts, excluding vines at breast height (DBI Woody plants, exclud- ater than 3.28 ft (1 n	a: 3 in. (7.6 cm H), regardles ling vines, le 1) tall. ants, regardle	n) or ss of ess tha
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1 _ 2 _ 3 _ 4 _ 5 _ 6 _ 7 _ 8 _ 9 _ 110 _ 112	Dichanthium Taraxacum Anagallis ar Oenothera s Verbena offi	n aristatum officinale vensis speciosa icinalis 50% m (Plot	of total cov	ver:	57	10 5 2 2 2 114 20%	N N N N	FACU UPL FACU	present, unless dis  Definitions of Formatte - Woody plant more in diameter in height.  Sapling/shrub - Woody plant more in DBH and green beight and woody plant woody plant woody plant more in the plant more in	sturbed or problemal ur Vegetation Strate nts, excluding vines at breast height (DBI Woody plants, exclud- ater than 3.28 ft (1 n	a: 3 in. (7.6 cm H), regardles ling vines, le 1) tall. ants, regardle	n) or ss of ess tha
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SOIL

Sampling Point:	19
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		o the depth nee			or or confir	m the absence of indicate	ors.)
Depth (inches)	Matrix Color (moist)	% Co	lor (moist)	Features % Type <sup>1</sup>	Loc2	Texture	Domorko
(inches)	Color (moist)		'R 7 / 8	% Type' 1 C	PL	Loamy Sand	Remarks
0-16	10YR 7 / 2		K // 0			Loanly Sand	
1Type: C=Co	ncentration, D=Depletion	n RM=Reduce	d Matrix CS=C	overed or Coate	d Sand Gra	ins 21 ocation: PI =Por	e Lining, M=Matrix.
-	Indicators: (Applica				d Sand Gra		oblematic Hydric Soils <sup>3</sup> :
Vindender regionale		Die to dii E. a to			0) /I DD C		CONTRACTOR
Histisol	I II	9	_	selow Surface (S			
_	oipedon (A2)		Service of the second s	Surface (S9) (LR		_ 2 cm Muck (A	
winds.	stic (A3)	-	<del>-</del> :	ky Mineral (F1)	(LRR O)	Market Land	ic (F18) (outside MLRA 150A,B)
	en Sulfide (A4)		_ Loamy Gley	ed Matrix (F2)			odplain Soils (F19) (LRR P, S, T)
	d Layers (A5)	-	_ Depleted M			Anomalous B	right Loamy Soils (F20)
_ Organic	Bodies (A6) (LRR P, 7	r, u) _	Redox Dark	Surface (F6)		(MLRA 153B	)
5 cm M	ucky Mineral (A7) (LRR	P, T, U)	_ Depleted Da	ark Surface (F7)		Red Parent M	laterial (TF2)
Muck P	resence (A8) (LRR U)	_	Redox Depr	ressions (F8)		Very Shallow	Dark Surface (TF12)
1 cm Mi	ick (A9) (LRR P, T)		Marl (F10) (	LRR U)		Other (Explain	n in Remarks)
Deplete	d Below Dark Suface (	A11)	Depleted O	chric (F11) (MLF	RA 151)	VI 923-21	
Thick D	ark Surface (A12)		Iron-Manga	nese Masses (F	12) (LRR C	P, P, T) 3Indicators of	hydrophytic vegetation and
Coast P	rairie Redox (A16) (ML	RA 150A)	Umbric Surf	face (F13) (LRR	P, T, U)		logy must be present.
Sandy N	Mucky Mineral (S1) (LR	R O, S)		(F17) (MLRA 1			ed or problematic.
Sandy 0	Bleyed Matrix (S4)	-3/1/2010	Reduced Ve	ertic (F18) (MLR	A 150A, 15	0B)	
	Redox (S5)	-		loodplain Soils (		DOWN LAW COMMON	
	Matrix (S6)	-				MLRA 149A, 153C, 153D)	
	rface (S7) (LRR P, S,	T. U)	_ /	g			
	Layer (if observed):			11011		4410	
Type:	N/A						
Depth (in	_	2.7			Hydric so	oil present? Yes	No <u>X</u>
Remarks:	- 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10						
Remarks.							

## List of Plant Species Motiva Savannah Site

Common Name	Scientific Name	Indicator Status
Bermuda Grass	Cynodon dactylon	FACU
Black-Edge Sedge	Carex nigromarginata	FACU
Robin's-Plantain	Erigeron pulchellus	FACU
Racemed Milkwort	Polygala polygama	FACU
Garden Vetch	Vicia sativa	FACU
Pink Evening Rose	Oenothera speciosa	UPL
Firewheel	Gaillardia pulchella	UPL
Crowpoison	Nothoscordum bivalve	FACU
Scarlet Pimpernel	Anagallis arvensis	UPL
Common Dandelion	Taraxacum officinale	FACU
Berlandier's Yellow Flax	Linum berlandieri	UPL
Giant-Reed	Arundo donax	FAC
Angular-Fruit Anglepod	Gonolobus suberosus	FACW
Angleton's Bluestem	Dichanthium aristatum	FACU
Roadside Blue-Eyed Grass	Sisyrinchium langloisii	UPL
Big Bluestem	Andropogon gerardii	FAC
Bushy Bluestem	Andropogon glomeratus	FACW
Chairmaker's Club-Rush	Schoenoplectus americanus	OBL
Tiny Blulet	Houstonia pusilla	FACU
Goldenmane Tickseed	Coreopsis basalis	UPL
Showy Evening Primrose	Oenothera grandis	UPL
Virginia pepperweed	Lepidium virginicum	UPL
Spiny-Leaf Sow-Thistle	Sonchus asper	UPL
Purple Prairie Clover	Dalea purpurea	UPL
Bristleleaf Pricklyleaf	Thymophylla tenuiloba	UPL
Torpedo Grass	Panicum repens	FACW

PORT OF CORPUS CHRISTI

# APPENDIX D Resumes of Field Personnel

# Ashley Bogrand, M.S. Biologist



## Summary

## **Years of Experience**

6

#### West US- Houston

17325 Park Row

Houston, TX 77084

#### **Industries**

- Oil and Gas
- Midstream

## **Areas of Expertise**

- Biological Resources
- Wildlife Inventories
- Avian Biology
- Vegetation Assessment
- Invasive Species Removal
- NEPA documentation
- Wetland Delineation
- Environmental Site Assessment
- ArcGIS

#### **Areas of Expertise**

Wetland Delineation - 2019

## **Professional Summary**

Ms. Bogrand is an experienced biologist with six years in the environmental and wildlife consulting field. Ms. Bogrand's experience includes biological resource inventories with emphasis on avian and wildlife biology, vegetation assessments, wetland delineations, Phase I Environmental Site Assessments (ESA), National Environmental Policy Act (NEPA) documentation, and experience with ArcGIS map creation and data management.

## Qualifications

#### Education

Bachelor of Science, Wildlife Biology, West Texas A&M University, 2009

Masters of Science, Biology, Sam Houston State University, 2013

#### Registrations / Certifications / Licenses

**40 Hour HAZWOPER** 

#### **Publications / Presentations**

 Bogrand, A.L., D.L.H. Neudorf, P. Matich. 2017. Predator recognition and nest defence by Carolina Wrens Thryothorus ludovicianus in urban and rural environments: does experience matter? Bird Study. 64: 211-221.

#### Software / Skills

ArcGIS

## **Current Projects**

- Motiva Berth Expansion
- Corpus Christi Harbor Island Development
- INEOS Wastewater Pipe Installation

## **Experience**

## **Biologist**

#### Phillips 66, Gray Oak Pipeline, Texas

Ms. Bogrand assisted on field surveys and permitting support services to Phillips 66 on the 845-mile-long Gray Oak Pipeline Project, proposed to transport crude oil from the Permian Basin to the Corpus Christi area. Ms. Bogrand conducted field surveys for the evaluation and identification of waters of the United States (WOUS), including wetlands and streams and threatened and endangered species surveys along the proposed pipeline routes.

# Ashley Bogrand, M.S. Biologist



600

## **Experience**

#### Motiva Enterprises LLC, Port Arthur Berth, Port Arthur, TX

 Motiva submitted pre-application packages to USACE Galveston to begin the process for the creation of a new liquid berth at the Motiva Refinery and Terminal in Port Arthur, TX. Ms. Bogrand assisted permitting specialists in designing responses to comments submitted by USACE and coordinating figure creation with the GIS sector.

#### Port of Corpus Christi Authority (POCCA), Harbor Island, Texas

 POCCA required sediment sampling (testing for aquatic vegetation, grain size, total organic carbons, and benthic invertebrates), water quality and velocity measurements, presence/absence of oyster reefs, and marine life netting and identification for the development of Harbor Island. Ms. Bogrand participated in composing work plans and health and safety plans. Ms. Bogrand also conducted surveys and testing for all necessary field sampling. This included using a Petite Ponar to collect benthic invertebrate and sediment samples, a Valeport 106 Water Velocity Meter to measure water velocity, and a flow meter to measure water quality. Future work will be participating in the composure of an EA.

#### **Environmental Scientist**

#### TPC Group, LLC, Houston Operations, Houston, TX

Ms. Bogrand assisted in the renewal process of the Texas Commission on Environmental Quality (TCEQ)
industrial wastewater discharge permit for TPC Group's Houston based facility. Activities included
analyzing sampling data, FEMA records, outflow systems, and composure of TCEQ Form 10055.

### Enbridge, Hockley Phase I Environmental Site Assessment (ESA), Hockley, TX

Ms. Bogrand conducted the Phase I ESA for three residential locations located in Hockley, TX. Activities
included field reconnaissance, review of state, county, and local records, and preparation of the Phase I
ESA report.

#### Enbridge, Jefferson County Right of Way Phase I ESA, Beaumont, TX

Ms. Bogrand conducted the Phase I ESA for an oil and gas pipeline right of way property. Activities
included field reconnaissance, review of state, county, and local records, and preparation of the Phase I
ESA report.

#### Lyondell, Waste Inventory Tracking Program Development, Channelview, TX

Ms. Bogrand organized all current and expired waste streams at two LyondellBasell locations into a
functioning, interactive database for the support of the waste management personnel. This database
included organizing waste into categories, and providing notifications when updates were needed to the
waste profile.

#### **Site Supervisor**

#### General Electric, Rose Equipment and Facility Decommissioning and Cleaning, Tyler, TX

Ms. Bogrand acted as site supervisor for the decommissioning and cleaning of a GE Plant in Tyler, TX.
 The role of site supervisor included monitoring for OSHA compliance and demonstrating successful completion of the project.

#### INEOS Styrolution, Construction of a Waste Water Pipe, Texas City, TX

Ms. Bogrand acted as construction supervisor and environmental monitor for installation of a wastewater
pipeline located in Texas City. This role involved managing safety for all sub-contractors, meeting with
the client, composing daily reports, and monitoring environmental issues such as spill cleanups, SWPPP
compliance, and general oversight.

# Ashley Bogrand, M.S. Biologist



## **Pre-Wood Employment**

#### **Gulf South Research Corporation**

Ms. Bogrand managed and conducted field surveys for biological resources with an emphasis on avian
and wildlife biology, contributing to the preparation of technical reports, data collection and analysis,
and support on ecological restoration and invasive species removal projects. Specific projects include
cowbird trapping, construction monitoring, breeding burrowing owl surveys, neo-tropical avian surveys,
general wildlife inventory surveys in the Mojave Desert, wildlife hazard assessments and surveys for the
Interior Least Tern on the Red River.

## Western Eco-systems Technology

Ms. Bogrand conducted aerial surveys of the Lesser and Greater Prairie Chickens. This included recording
data and identifying between the two types of Prairie Chickens. She also managed and conducted post
construction monitoring on wind farms. This involved using plot surveys following transect protocol to
monitor bird and bat fatalities and using proper identification methods to identify bird and bat species.

## The City of Amarillo

• Ms. Bogrand maintained and updated the water and waste water GIS database with record drawing information from project representatives. She operated computer workstation to update maps as new data is received relative to subdivisions, developments, capital improvement projects, and other projects. Ms. Bogrand prepared water and waste water drawings using GIS software. Assisted in the organization and filing of drawings, plans and other documents related to the maintenance and upkeep of record drawing information. This also included, producing printed water and waste water maps for both the Utilities office and the general public showing map features, platted lots, and distances.

#### **Eco-logical Environmental Services**

Ms. Bogrand managed projects from initial client consultation through project completion. Conducted
Phase I site assessments and reports and generated storm water discharge permitting and compliance.
She generated technical and well-composed reports to clients and government regulatory agencies and
provided communication to field personnel, vendors, and different government agencies to complete
projects on time. This work also included conducting assessment and remediation processes and
procedures on a variety of chemical spills and disposing of hazardous and non-hazardous waste from
various industries.

## **Professional History**

- Wood (2018 Present)
- Gulf South Research Corporation (2016-2018)
- Western Ecosystem Technology (2015-2016)
- The City of Amarillo, Texas (2013-2015)
- Eco-logical Environmental Services (2013)

Orlando Recio@yahoo.com 3301 Olsen Dr. Corpus Christi, TX 78411 361.779.3057

## Orlando Recio Civil Engineer, EIT

Years of experience

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Registrations/Certifications Engineer In Training, Texas Professional affiliations American Society of Civil Engineers

Water Environment Association of Texas

(WEAT)

Education

B.S., 2008, Civil Engieering, Texas A&M University-Kingsville, Kingsville, TX

Mr. Recio is currently an Engineer in WOOD's Corpus Christi, Texas office. Over the years Mr. Recio has gained experience, Subsurface Utility Engineering (SUE), utility design, construction, operations, and inspection of civil type projects (roads, highways, levees, pipelines). Projects have included design build projects, roadways, highways, drainage studies, environmental testing and analysis, and flood mitigation measures using GIS mapping techniques. Additionally, Mr. Recio also has extensive experience in Environmental assessment and site remediation for Industrial clients. In addition to project experience he has also served as a Site Health and Safety Representative whom was responsible for reviewing safety plans, addressing local safety issues and passing on important information to colleagues. As a Project Engineer, Mr. Recio understands the need for creating a friendly and reliable workplace culture conducive for project success and that the safety of the general public and fellow coworkers is paramount.

#### Selected project experience

Site Remediation, Industrial Client, Corpus Christi, TX.

Mr. Recio is responsible for the operation of on-site extraction and treatment of groundwater with a significant historical hydrocarbon release. He also assists in several field work activities such as sampling, construction oversight and general maintenance activities for the onsite Ground Water Recovery Unit. In addition to that Mr. Recio evaluates the effectiveness of the recovery network of wells and routinely updates the client. **Date:(October 2018-Current).** 

### Water Waste and Remediation Services, Industrial Client, Corpus Christi, TX

Mr. Recio was the Project Manager for a 5 year contract to provide Operation and Maintenance Services on a remediation site as well as provide regulatory and environmental consultation services to the client. Mr. Recio was the direct contact to the client and manages new tasks by developing budgets and pulling in company resources as needed. Mr. Recio also coordinated semi-annual sampling and reporting requirements to the TCEQ for two project locations. Date: February 2017—September2018

#### Harbor Bridge Design Build Utility Coordinator, Flatiron/Dragados LC. Corpus Christi, TX

Mr. Recio was the lead utility coordinator for a TxDOT project building a new bridge in Corpus Christi, TX. He was responsible for coordinating with Utility Stakeholders and project designers to adjust utilities in the way of construction. These efforts included conducting a SUE investigation, cataloging all utilities and assisting all utility stakeholders through a unique permit process. He managed a small team to ensure all stakeholders are being assisted promptly and all deliverables are being met promptly. Date: (January 2016 – February 2017)

#### Benzene Waste Operations Neshaps (BWON) Sampling Initiative, Industrial Client, Corpus Christi, TX.

Mr. Recio has worked with the client to develop a procedure for sampling over 800 high risk waste streams. Mr. Recio also was involved in hiring and training team for conducting field work. He is responsible for developing sampling schedule, analyzing results and providing continual updates to the client. Mr. Recio also will respond and coordinate any additional tasks that the client request. **Date:** (**December 2014 – December 2015**).

#### Soil Vapor Extraction, Industrial Client, Corpus Christi, TX.

Mr. Recio has ran a "first of its kind" SVE unit and has been vital in its optimization. He routinely samples and monitors various points and ships out hazardous classified samples via FEDEX. Also, as new wells are installed he has coordinated with utility locators and drilling companies to ensure all the work is done safely and without incident. **Date: (2012-2015).** 

#### Site Remediation, Industrial Client, Corpus Christi, TX.

Mr. Recio has designed an access road for a system responsible for the operation of on-site extraction and treatment of groundwater with a significant historical hydrocarbon release. He has also assisted in several field work activities such as sampling and semi-annual gauging events and construction oversight for a new Ground Water Recovery Unit. In addition to that Mr. Recio has performed several pump tests in order to maximize effectiveness of their recovery network of wells. **Date:(2008-2015).** 

#### Phase I Environmental Site Assessment (ESA), Texas General Land Office, Rockport, TX.

Mr. Recio conducted environmental site assessments of several tracts of land and interviewed land owners, investigating any historic impacts. A detailed report was then put together by Mr. Recio and submitted to the Texas GLO. Date: (2012 -2015)

#### Ballard Sand Pits Monitoring, TCEQ, Robstown, TX.

Mr. Recio has air monitored the remediation site for high concentrations of benzene in the air and was responsible for alerting personnel when any high concentrations were present. This was so that immediate actions can be taken and the surrounding community and construction workers would remain safe. This area was used as a dumping site for several contaminants, most notably benzene. During this project he worked closely with the TCEQ as this was a Super Fund Site. Date:(Sept –July 2009)