APPENDIX F INSHORE WETLAND DELINEATION REPORT



WETLAND DELINEATION REPORT FOR INSHORE COMPONENTS OF THE PROPOSED BLUEWATER SPM PROJECT IN ARANSAS, NUECES, AND SAN PATRICIO COUNTIES, TEXAS

Prepared for

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1 INTRODUCTION

Lloyd Engineering, Inc. (Lloyd) retained SWCA Environmental Consultants (SWCA) to conduct a delineation of potential waters of the U.S., commonly referred to as a wetland delineation, for inshore components associated with the proposed Bluewater SPM Project located in Aransas, Nueces, and San Patricio Counties, Texas. The proposed Bluewater SPM Project will be located within the U.S. Army Corps of Engineers (USACE) Galveston District area of responsibility. Refer to Appendix A for a vicinity map depicting the location of the survey area investigated for inshore components associated with the Bluewater SPM Project.

The proposed Bluewater SPM Project consist of the construction and operation of onshore, inshore, and offshore components including a deepwater port to provide a logistical solution for the safe and reliable export of crude oil. This wetland delineation report presents the results of field surveys conducted for inshore project components including two 30-inch-diameter pipelines, booster station, and associated construction workspaces. The proposed inshore pipeline infrastructure originates near Aransas Pass, Texas, crosses to Stedman Island, and parallels State Highway 361 onto Harbor Island where a booster station will be positioned. From this point, the inshore pipelines will cross Lydia Ann Channel onto San Jose Island to extend offshore into the Gulf of Mexico. Refer to Figure 1 (Vicinity Map) in Appendix A for a depiction of the survey area investigated for inshore components associated with the proposed Bluewater SPM Project.

According to the USACE, waters of the U.S. include territorial seas, tidal waters, traditional navigable waters, interstate waters, and the adjacent, contributing, or impoundments of these waters (e.g., rivers, creeks, streams, lakes, reservoirs). Special aquatic resources associated with these waters are also considered waters of the U.S. and include sanctuaries and refuges, wetlands, mud flats, vegetated shallows, coral reefs, and riffle and pool complexes.

Wetlands are typically the most common special aquatic resources present and are defined by the USACE as "areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (40 Code of Federal Regulations [CFR] 230.3(t)). Based on this definition, for an area to be considered a wetland it must possess the following parameters under normal circumstances: 1) a predominance of plants adapted to live in water or saturated soils (i.e., hydrophytic vegetation), 2) soil characteristics of frequent saturation (i.e., hydric soils), and 3) the presence of hydrology showing evidence of regular flooding or ponding (i.e., wetland hydrology).

2 METHODS

2.1 Resources Review

Prior to performing the delineation, SWCA conducted a resources review of available background information to help identify the portions of the project area most likely to contain wetlands and/or waterbodies. Resources reviewed included historic aerial photography, U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) data, U.S. Geological Survey (USGS) National Hydrography Dataset (NHD) data, historic USGS topographic quadrangles, and available Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) data.

2.2 Wetlands

SWCA conducted field surveys of the project area during January and February 2019, following the wetland delineation guidelines provided in both the *Corps of Engineers Wetlands Delineation Manual* (Manual) (USACE 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region* (Regional Supplement) (USACE 2010). As part of the delineation efforts, SWCA traversed and assessed the project area for the presence or absence of the three wetland parameters (i.e., hydrophytic vegetation, hydric soils, and wetland hydrology).

Data sheets, which represent areas of uniformity (i.e., similar vegetation, soils, and hydrology), were completed at select locations (i.e., data points) throughout the project area to differentiate wetland and non-wetland areas by documenting the presence or absence of the wetland parameters (Appendix B). Data point locations included wetland/non-wetland boundaries, NWI feature locations and areas suggestive of inundation or saturation in aerial imagery evaluated during the resources review, and the various non-wetland vegetation community types encountered within the project area. At each data point, SWCA took photographs to support the information recorded on the data sheets and document the general conditions observed in the field. A subset of the photographs is provided in the photographic log in Appendix C.

2.2.1 Vegetation Community Types and Hydrophytic Vegetation

Vegetation community types within the project area were categorized based on the uppermost layer of vegetation into one of three categories: emergent/herbaceous, scrub-shrub, or forested. Wetland communities were further described using the *Classification* of Wetlands and Deepwater Habitats of the United States (Cowardin et al. 1979). Wetland and non-wetland vegetation communities were differentiated by the presence or absence of hydrophytic vegetation, respectively.

Hydrophytic vegetation refers to a plant species adapted to survive in saturated or inundated soils for at least 5 percent of the growing season. A given area is said to have hydrophytic vegetation when the prevalence of hydrophytes (water-adapted plants) exceeds that of non-hydrophytes based on species wetland indicator status ratings assigned by the USACE. To assess this parameter consistently with the Regional Supplement, SWCA personnel listed all plants by strata within circular sample plots centered at each data point as well as each plant species' absolute areal cover to derive dominance and prevalence values. Then, based on the USACE National Wetland Plant List: 2016 Wetland Ratings, SWCA personnel assigned the appropriate wetland indicator status rating to each species and compared the relative proportions of hydrophytes to non-hydrophytes to determine if the assessed plant community met the hydrophytic vegetation parameter (Lichvar et al. 2016).

2.2.2 Hydric Soils

Hydric soils typically have characteristics indicating that they formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper strata (Soil Conservation Service 1994). Characteristic indicators of hydric soils are described in the 2010 Natural Resources Conservation Service (NRCS) *Field* Indicators *of Hydric Soils in the United States, Version 7.0* (NRCS 2010). Soils that do not match any of the accepted hydric soil indicators are considered non-hydric. To assess this parameter consistent with the Regional Supplement, SWCA personnel extracted soil pedons to a depth of no more than 20 inches at the data points and recorded soil characteristics (e.g., color, texture, redoximorphic features) necessary for comparison to known indicators. The hydric soil parameter was met when the soil profile matched the description of a regionally accepted hydric soil indicator.

2.2.3 Wetland Hydrology

Wetland hydrology refers to observable characteristics that confirm recent or continuing inundation and/or soil saturation within an assessed area during the growing season. Direct observation of continuous saturation or inundation within 12 inches of the soil surface for a duration of no less than 14 consecutive days will meet the standard for hydrology specified in the 2005 USACE Technical Standard for Water Table Measurements of Potential Wetlands (USACE 2005a). Because on-site investigations to accurately determine the presence or absence of this standard are often impractical, the Regional Supplement describes a variety of readily observable primary (more reliable) and secondary (less reliable) hydrologic indicators that serve as sufficient evidence of wetland hydrology, when present. In accordance with the Regional Supplement, all indications of periodic inundation and/or soil saturation within an assessed area were recorded and compared to known wetland hydrology indicators. If the area displayed at least one primary indicator or two secondary indicators, the wetland hydrology parameter was met.

Of the three wetland assessment parameters, wetland hydrology is perhaps the most difficult to accurately assess because it is both transitory and influenced by physical and climatic factors (e.g., precipitation, soil permeability, stratigraphy, topography). In this region, the normality of precipitation (primarily as rainfall) has a substantial temporal influence on wetland hydrology. This is particularly true for the summer months when evapotranspiration rates are highest and typically result in receding water tables. Therefore, it is essential to assess wetland hydrology with respect to rainfall normality within the project area. SWCA accomplished this by employing the direct antecedent rainfall evaluation method (DAREM) (Sprecher and Warne 2000). This method assesses an area's wetland hydrologic condition by comparing prior 3-month precipitation values to 30-year norms available from the NRCS in tabular form as Wetlands Evaluation Tables (WETS) (NRCS 1997). Evaluation using DAREM classifies the wetland hydrologic condition of an area into one of three categories: drier than normal, normal, or wetter than normal. SWCA considered this assessment, along with rainfall events during or shortly before the delineation, to determine if identified wetland hydrology indicators should be considered normal or resultant of wetter than normal hydrologic conditions, or if hydrology indicators were lacking due to abnormal or problematic conditions.

2.3 Waterbodies

SWCA delineated all waterbodies within the project area that are tidal or possess an ordinary high water mark (OHWM). At each waterbody, SWCA took photographs and documented its general characteristics (e.g., tidal indicators, OHWM dimensions, flow, substrate, etc.).

Tidal waterbodies, if present, were delineated at the high tide line (HTL) which is defined by the USACE as "the line of intersection of the land with the water's surface at the maximum height reached by a rising tide" (33 CFR 328.3(d)). The HTL includes periodic extreme tides (e.g., spring high tide) while excluding the effects of strong winds and storm surges. The HTL, if present, was determined with actual data, when readily available, or via accepted indicative characteristics such as a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, vegetation lines, tidal gauges, or other suitable means.

Non-tidal waterbodies, if present, were delineated at the OHWM using the recommendations of the 2005 USACE Regulatory Guidance Letter 05-05: Ordinary High Water Mark Identification (USACE 2005b). An OHWM is a line on the shore established by the fluctuations of water during ordinary high water flows and indicated by physical characteristics such as "a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and

debris, or other appropriate means that consider the characteristics of the surrounding areas" (33 CFR 328.3(e)).

2.4 Mapping

SWCA used a Trimble Geo-Explorer 7X series global positioning system (GPS) unit to geographically reference features, such as data point locations and wetland/waterbody boundaries, identified during the delineation. SWCA used geographic information system (GIS) software to differentially correct (i.e., post-process) collected features, calculate areas, and generate the attached wetland delineation map (see Appendix A). The point, line, and polygon data displayed on the attached maps, though collected with a GPS unit capable of submeter accuracy, are for review purposes only and do not represent a professional civil survey. Data points and delineated features are identified by a unique identifier. Wetlands, streams/channels, and ponds, if present, are identified by "WA," "S," and "P" as the first character, respectively, and followed by a team designation "A" and a unique sequential number beginning with 01. For example, WA001 is the first wetland that was delineated by team A. Data points are identified by "DP" followed by the team letter designation, a unique sequential number beginning with 001, an underscore, and the type of vegetation community in which the data point is located (e.g., "PEM" for emergent wetland). For example, DPA003_PEM represents the third data point taken by team A within an emergent wetland.

3 RESULTS

3.1 Wetlands

SWCA delineated 43 distinct wetland areas totaling 75.827 acres within the survey area. Of the 43 wetlands mapped, eleven wetlands were Palustrine Emergent (PEM), one Palustrine Scrub/Shrub (PSS), 22 Estuarine Intertidal Emergent (E2EM), eight Estuarine Intertidal Scrub/Shrub (E2SS), and one Estuarine Intertidal Unconsolidated Shore (E2US) (Table 1). See Figure 2 in Appendix A for the location of wetlands and data points within the project area. Photographs of select wetlands are provided in Appendix C. Refer to Table 1 for the list of the delineated wetlands and their characteristics.

Table 1. Wetland Characteristics

Wetland ID	Map Sheet No. (Figure 2)	Vegetation Community Type	Acreage
WA001	1	PEM	0.460
WA002	1	PEM	0.445
WA003	1	PEM	0.253
WA004	1	E2SS	1.135
WA005	1	E2EM	1.961
WA006	1, 2	E2EM	14.528
WA006	1, 2	E2SS	4.573
WA007	2	E2EM	0.563
WA008	1	E2EM	0.463
WA009	3	E2EM	0.056
WA010	3	E2EM	0.293

Wetland ID	Map Sheet No. (Figure 2)	Vegetation Community Type	Acreage
WA011	5	PEM	0.719
WA012	5	E2EM	2.176
WA013	5	PEM	5.538
WA014	5	E2SS	0.212
WA015	3	E2EM	1.968
WA016	4, 5	PEM	0.832
WA017	6	PEM	0.053
WA018	5	PEM	0.342
WA019	5	PEM	0.415
WA020	5	E2SS	0.024
WB002	5	E2EM	0.510
WB003	4, 5	PSS	3.399
WB004	4	E2EM	0.032
WB005	4	E2SS	0.595
WB006	4, 5	E2SS	0.226
WB007	4	E2EM	0.064
WB008	4	E2EM	0.087
WB009	4	E2EM	0.038
WB010	4	E2EM	0.013
WB011	4	E2EM	0.077
WB012	4	E2EM	0.133
WB013	4	E2EM	0.248
WB013	3, 4	E2SS	0.638
WB014	3, 4	E2EM	0.055
WB014	3	E2SS	2.082
WB015	3	E2EM	0.429
WB016	3	E2EM	0.074
WB018	6	E2EM	1.096
WC001	6	PEM	14.410
WC002	6	E2EM	0.014
WC003	6	E2US	12.452
WC004	6	PEM	2.142
		PEM Wetlands Subtotal	25.610
		PSS Wetlands Subtotal	3.399
		E2EM Wetlands Subtotal	24.880
		E2SS Wetlands Subtotal	9.485

Wetland ID	Map Sheet No. (Figure 2)	Vegetation Community Type	Acreage
		E2US Wetlands Subtotal	12.452
		Total	75.827

3.1.1 Vegetation Communities

SWCA observed seven vegetation community types within the project area: five wetland vegetation communities (i.e., palustrine emergent wetlands, estuarine intertidal emergent wetlands, estuarine unconsolidated shore wetlands, palustrine scrub-shrub wetlands, and estuarine intertidal scrub-shrub wetlands) and two upland vegetation communities (i.e., herbaceous uplands and scrub-shrub uplands). The species identified at each data point, along with their areal coverage, are recorded on the data sheets in Appendix B. A photographic log, which includes a representative subset of all the vegetation communities observed within the project area as viewed from select data points, is provided in Appendix C. The dominant species identified within each vegetation community type are listed below.

Palustrine Emergent Wetland. The palustrine emergent wetland community consists of a prevalence of hydrophytic non-woody vegetation less than 3 feet in height and are located along depressional areas within the project area. Dominant herbaceous species include bushy bluestem (*Andropogon glomeratus*), turtleweed (*Batis maritima*), sea ox-eye (*Borrichia frutescens*), shore grass (*Distichlis littoralis*), coastal saltgrass (*D. spicata*), Roemer's rush (*Juncus roemerianus*), salt-meadow cord grass (*Spartina patens*), gulf cord grass (*S. spartinae*), three-square (*Schoenoplectus pungens*), and broad-leaf cat-tail (*Typha latifolia*).

Estuarine Intertidal Emergent Wetland. The estuarine intertidal emergent wetland community consists of a prevalence of hydrophytic non-woody vegetation less than 3 feet in height and are located near coastal waterbodies within the project area. Dominant herbaceous species include black mangrove (Avicennia germinans), turtleweed, sea ox-eye, Carolina desert-thorn (Lycium carolinianum), shore grass, coastal saltgrass, common spike-rush (Eleocharis palustris), dwarf saltwart (Salicornia bigelovii), woody saltwort (S. depressa), shoreline sea-purslane (Sesuvium portulacastrum), saltwater cord grass (Spartina alterniflora), gulf cord grass, three-square, and broad-leaf cat-tail.

Estuarine Unconsolidated Shore Wetland. The estuarine unconsolidated shore wetland community consists of a prevalence of hydrophytic non-woody vegetation less than 3 feet in height and are located near coastal shores within the project area. Dominant herbaceous species include shore grass and woody saltwort.

Palustrine Scrub-Shrub Wetland. The palustrine scrub-shrub wetland community consists of a prevalence of hydrophytic woody species 3 to 20 feet in height and less than 3 inches in diameter at breast height located along depressional areas within the project area. The dominant shrub and sapling species include Brazilian peppertree (*Schinus terebinthifolius*). Dominant herbaceous species include common spike-rush.

Estuarine Intertidal Scrub-Shrub Wetland. The estuarine intertidal scrub-shrub wetland community consists of a prevalence of hydrophytic woody species 3 to 20 feet in height and less than 3 inches in diameter at breast height located near coastal waterbodies within the project area. The dominant shrub and sapling species include black mangrove. Dominant herbaceous species include turtleweed, shore grass, dwarf saltwart, woody saltwort, and saltwater cord grass.

Herbaceous Upland. The herbaceous upland community consists of non-wetland areas dominated by nonwoody vegetation. Dominant herbaceous species include perennial ragweed (*Ambrosia psilostachya*), bushy bluestem, sea ox-eye, yellow bluestem (*Bothriochloa ischaemum*), Bermudagrass (*Cynodon dactylon*), common sunflower (*Helianthus annuus*), nimblewill (*Muhlenbergia schreberi*), cactus apple (*Opuntia engelmannii*), and little bluestem (*Schizachyrium scoparium*).

Scrub-shrub Upland. The scrub-shrub upland class consists of non-wetland areas with canopies dominated by woody vegetation such as immature trees and shrubs. The scrub-shrub upland within the project area is comprised of a sapling/shrub layer dominated by Brazilian peppertree and saltcedar (*Tamarix ramosissima*). The herbaceous layer is comprised predominantly of Bermudagrass, nimblewill, cactus apple, gulf cord grass, and white clover (*Trifolium repens*).

3.1.2 Soils

According to the NRCS Web Soil Survey for Aransas, Nueces, and San Patricio Counties, Texas (NRCS 2019), five soil map units and three miscellaneous (Water, Beaches, and Tidal Flats) are present within the project area. Of the five soil map units, four are listed as including hydric components (Table 2). Brief descriptions of the NRCS soil map units present within the project area are provided in Appendix D.

Although an NRCS hydric listing alone is generally insufficient to determine whether soils for a site are hydric, it does indicate that suitable soil properties or conditions exist that promote the formation of hydric soil conditions. Therefore, the portions of the project area depicted as containing hydric soil map units were subjected to greater scrutiny with respect to the presence of hydric soil indicators.

Wetland areas observed within the project area displayed four hydric soil indicators: sandy redox, sandy gleyed matrix, depleted matrix, and loamy gleyed matrix. Non-wetland (i.e., upland) areas either failed to display hydric soil indicators or displayed hydric soils but failed to meet vegetation or hydrology parameters (or both). Refer to Appendix B for datapoint-specific soil observations.

Table 2. NRCS-Mapped Soils and	Their Hydric Characteristics
--------------------------------	------------------------------

Map Unit		Hydric Map	Hydric Com	ponent Characteri	stics	A
Name (Unit Code)	County Code	Unit (Yes/No)	Series Name (Unit Percent)	Landform	Hydric Criteria*	 Acreage within Project Area[†]
Ма	TX355	Yes	ljam (85%)	Flats	2	122.50
Mu	TX355	Yes	Mustang (85%)	Barrier Flats	2	76.30
Mu	TX620	Yes	Mustang (85%)	Barrier Flats	2,3	48.29
Ps	TX620	No	Psamments (80%)	Foredunes	n/a	9.76
Ds	TX620	Yes	Dianola (85%)	Strand Plains	2,4	1.22

^{*} Hydric Criteria: 2 = somewhat poorly to very poorly drained soils that have a shallow water table (i.e., at a depth of less than 1 foot) during the growing season; 3 = soils that are frequently ponded (i.e., greater than 50 percent of years) for greater than 7 days duration during the growing season. 4 = soils that are frequently flooded (i.e., greater than 50 percent of years) for greater than 7 days duration during the growing season.

3.1.3 Hydrology

The DAREM wetland hydrologic condition for January and February 2019 were calculated using WETS and precipitation data from the Port Aransas weather station located approximately 0.75 miles south of the proposed project area in Nueces County, Texas (Tables 3 and 4) (Sprecher and Warne 2000; U.S. Department of Agriculture 2019; NOAA 2019). The precipitation and 30-year normal range values used to calculate the wetland hydrologic condition at the time of the survey are provided in Table 3. According

[†] Acreages rounded to the nearest 0.01 acre.

to the DAREM, the project area was experiencing wetter than normal hydrologic conditions during the first month of delineation surveys and normal hydrologic conditions in the second month. Refer to Appendix B for datapoint-specific wetland hydrology observations.

Wetland hydrology indicators observed in the project area included both primary wetland hydrology indicators (i.e., algal mat/crust, aquatic invertebrates, hydrogen sulfide odor, saturation, surface water, and water marks) and secondary wetland hydrology indicators (i.e., crayfish burrows, a positive FAC-neutral test, sparsely vegetated concave surface). See Appendix B for datapoint-specific wetland hydrology observations.

Table 3. Project Area Wetland Hydrologic Conditions During January 2019

Prior M	onth	WE7	rS Per (inch	rcentile es) 70 th		asured ainfall	Ra	infall Co	ondition*		/lonth /eight [†]		Score [‡]	
1st	December 2018	0.65		1.79	0.93			2			3		6	
2nd	November 2018	1.24		3.67	3.89			3		2		6		
3rd	October 2018	1.42		4.61	6.29			3			1		3	
DAREM	l Score (i.e., Scores	s Total)											15	
DA	AREM Score	6	7	8	9	10	11	12	13	14	<u>15</u>	16	17	18
	DAREM Wetland Hydrologic Condition Drier than normal						Normal			W	etter th	an norm	<u>nal</u>	

Data source: Port Aransas weather station (Global Historical Climatology Network: USC00417170).

Table 4. Project Area Wetland Hydrologic Conditions During February 2019

Prior M	onth		S Pero (inche	centile s) 70 th		asured ainfall	Ra	infall Co	ondition	•	∕lonth ∕eight [†]		Score [‡]	
1st	January 2019	1.10		2.85		1.99		2			3		6	
2nd	December 2018	0.65		1.79	0.93			2			2		4	
3rd	3rd November 2018 1			3.67		3.89		3			1		3	
DAREN	l Score (i.e., Scores	Total)											13	
						_					ā			
DA	AREM Score	6	7	8	9	10	11	12	<u>13</u>	14	15	16	17	18
DAREM Wetland Hydrologic Condition Drier than normal							<u>Normal</u>			W	etter th	an norm	al	

Data source: Port Aransas weather station (Global Historical Climatology Network: USC00417170).

3.2 Waterbodies

SWCA identified 12 waterbodies within the survey area consisting of four ditches, two streams, one coastal inlet, three ponds, one bay, and the Gulf of Mexico, totaling 13.781 acres. The identified waterbodies and their characteristics are shown in Table 5. Refer to the delineation map in Appendix A for the location of the waterbodies within the project area. Photographs of select waterbodies are provided in Appendix C.

Table 5. Waterbody Characteristics

Waterbody ID	Map Sheet No. (Figure 2)	USGS Name	Flow/ Permanence	Туре	OHWM Width (feet)	Length within Survey Area (linear feet)	Acreage within Survey Area*
SA001	1	N/A	Ephemeral	Ditch	8	141.8	0.027
SA002	1	N/A	Ephemeral	Ditch	1	294.1	0.007
SA003	1	N/A	Ephemeral	Ditch	3	280.1	0.019

^{*} Month Conditions are 1 for Prior Month Rainfall that were less than the 30th WETS percentile, 2 for Prior Month Rainfall that were between the 30th and 70th WETS percentiles, and 3 for Prior Month Rainfall that were greater than the 70th WETS percentile.

[†] Month Weights are 3 for the month just prior, 2 for the second prior month, and 1 for the third prior month.

[‡] Month Scores are the product of the Month Condition and Month Weight.

^{*} Month Conditions are 1 for Prior Month Rainfall that were less than the 30th WETS percentile, 2 for Prior Month Rainfall that were between the 30th and 70th WETS percentiles, and 3 for Prior Month Rainfall that were greater than the 70th WETS percentile.

[†] Month Weights are 3 for the month just prior, 2 for the second prior month, and 1 for the third prior month.

[‡] Month Scores are the product of the Month Condition and Month Weight.

Waterbody ID	Map Sheet No. (Figure 2)	USGS Name	Flow/ Permanence	Type	OHWM Width (feet)	Length within Survey Area (linear feet)	Acreage within Survey Area [*]
SA005	5	N/A	Ephemeral	Ditch	2	1078.5	0.048
SA006	5	N/A	Intermittent	Stream	12	387.0	0.107
SA007	5	N/A	Perennial	Stream	20	839.2	0.445
PA001	3	N/A	Perennial	Pond	N/A	N/A	0.091
PB002	3	N/A	Perennial	Pond	N/A	N/A	0.053
PB003	6	N/A	Perennial	Pond	N/A	N/A	0.342
PB001	3	N/A	Perennial	Coastal Inlet	N/A	N/A	0.196
SC001	6	Lydia Ann Channel	Perennial	Channel/Bay	N/A	N/A	6.757
SC002	6	Gulf of Mexico	Perennial	Ocean	N/A	N/A	4.941
				Ephemeral Cl	nannel Subtotal	1,794.6	0.101
				Intermittent Cl	nannel Subtotal	387.0	0.107
				Perennial Cl	nannel Subtotal	839.2	0.445
					Pond Subtotal	N/A	0.486
			Coasta	I Inlet, Bay, and	Ocean Subtotal	N/A	11.894
Total						4,717.9	13.033

^{*} Acreages were rounded to the nearest 0.001 acre; Centerline length was rounded to the nearest 0.1 ft.

4 SUMMARY AND CONCLUSIONS

SWCA performed a wetland delineation for inshore components associated with the proposed Bluewater SPM project. The delineation identified 43 distinct wetlands, consisting of eleven Palustrine Emergent (PEM), one Palustrine Scrub/Shrub (PSS), 22 Estuarine Intertidal Emergent (E2EM), eight Estuarine Intertidal Scrub/Shrub (E2SS), and one Estuarine Intertidal Unconsolidated Shore (E2US), totaling 75.827 acres. Additionally, the delineation identified 12 waterbodies within the survey area, consisting of four ditches, two streams, one coastal inlet, three ponds, one bay, and the Gulf of Mexico, totaling 13.781 acres.

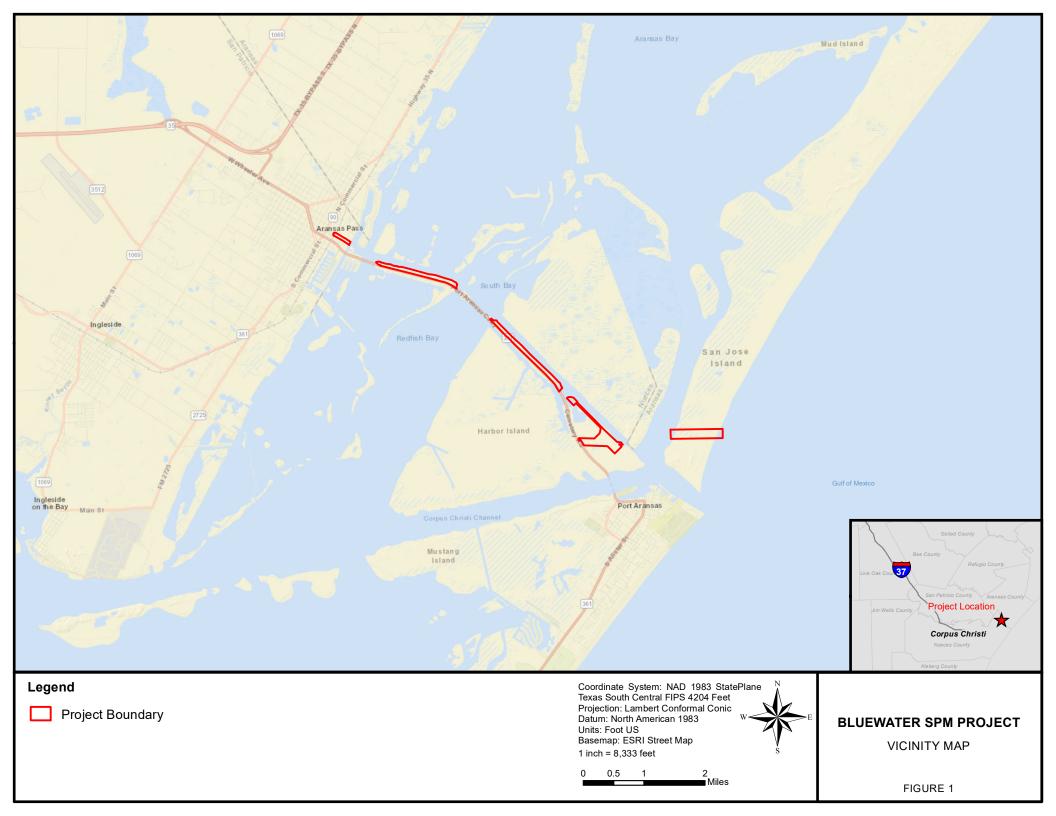
The delineation findings in this report represent the professional opinion of SWCA and are not a verification or jurisdictional determination of waters of the U.S. Only the USACE is authorized to verify the boundaries and jurisdictional limits of waters of the U.S.

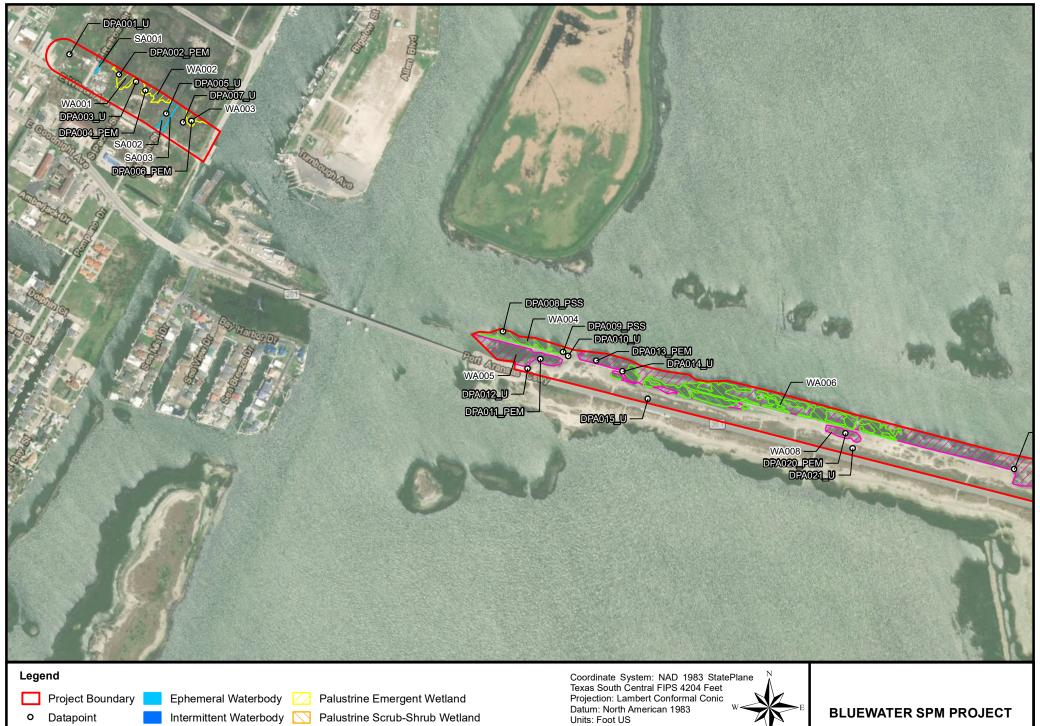
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APPENDIX A

Figures





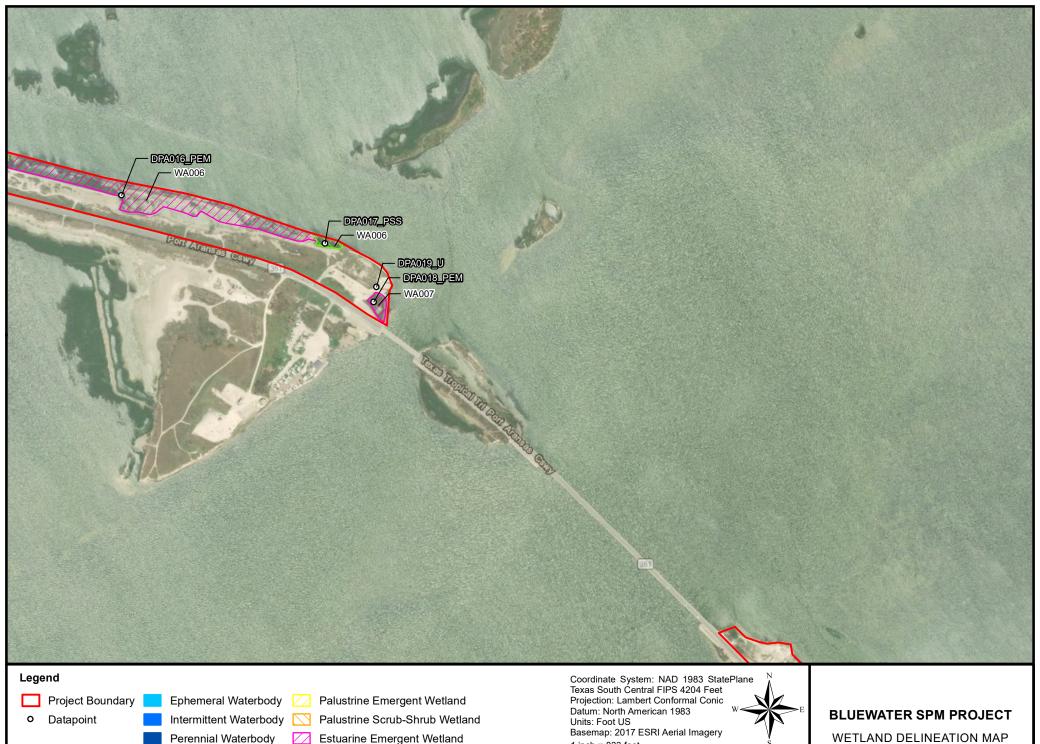
O Datapoint Intermittent Waterbody Palustrine Scrub-Shrub Wetland Units: Foot US Basemap: 2017 ESRI Aerial Imagery 1 inch = 833 feet Pond Estuarine Scrub-Shrub Wetland

Estuarine Scrub-Shrub WetlandSalt Flat

250 500 1,000 Feet

FIGURE 2 - SHEET 1 OF 6

WETLAND DELINEATION MAP



Basemap: 2017 ESRI Aerial Imagery Perennial Waterbody Estuarine Emergent Wetland 1 inch = 833 feet

Pond

Estuarine Scrub-Shrub Wetland 1,000 Feet 250 500 Salt Flat

FIGURE 2 - SHEET 2 OF 6

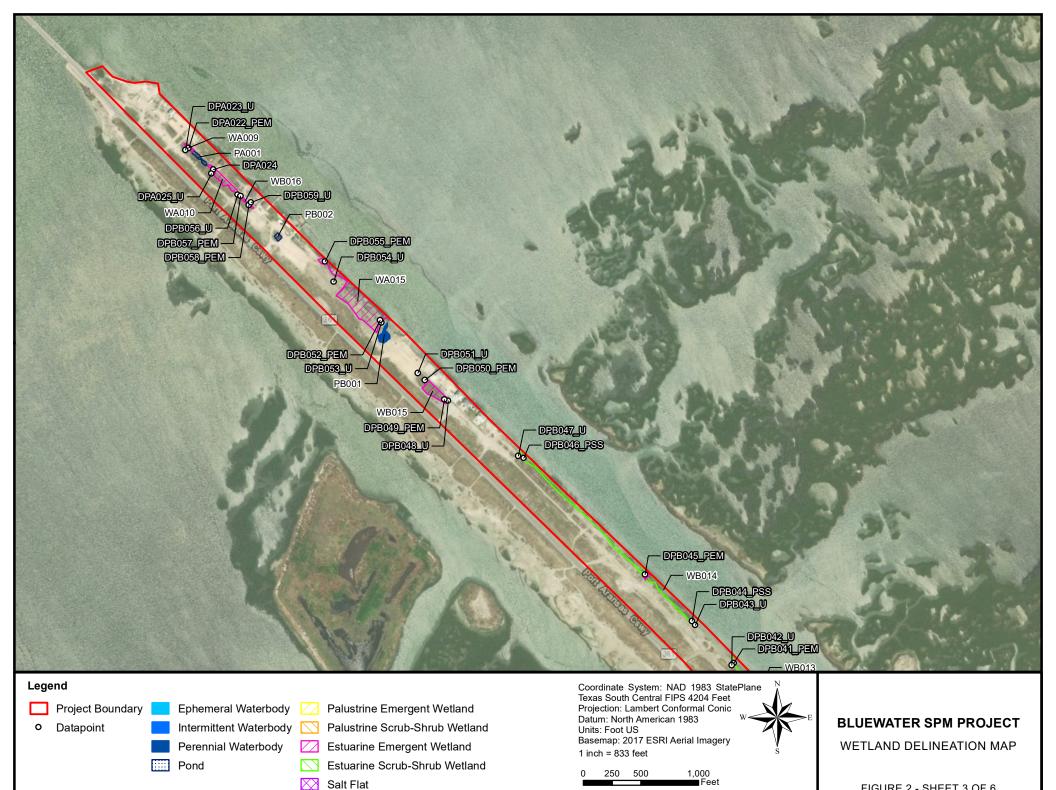
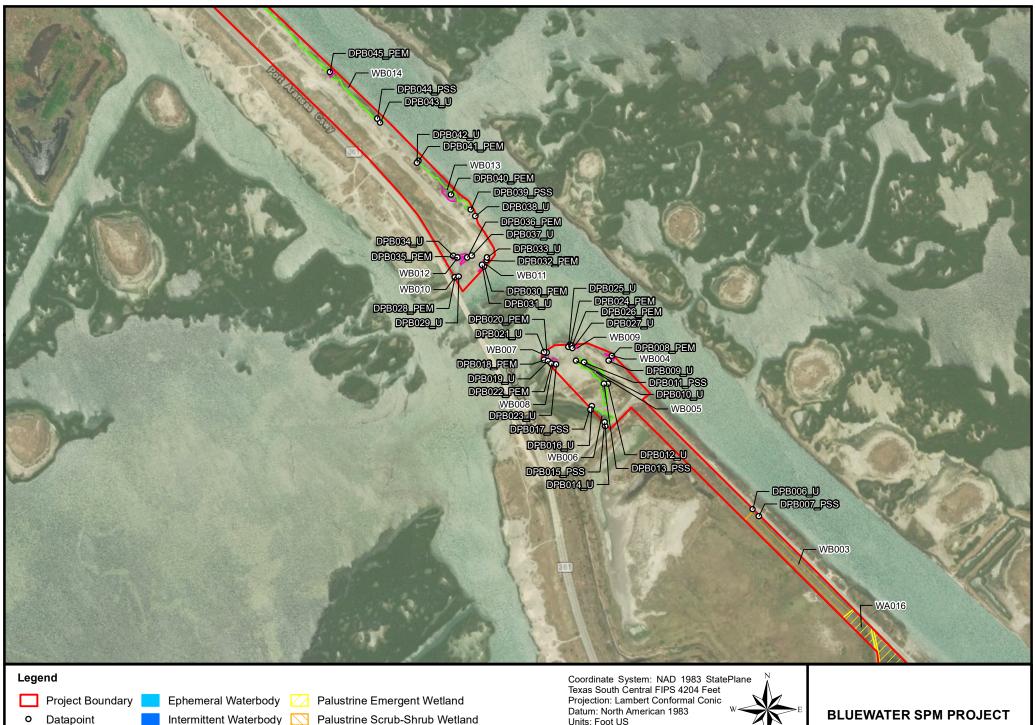


FIGURE 2 - SHEET 3 OF 6



Datapoint Intermittent Waterbody Palustrine Scrub-Shrub Wetland Units: Foot US

Perennial Waterbody Estuarine Emergent Wetland Units: Foot US

Basemap: 2017 ESRI Aerial Imagery
1 inch = 833 feet

WETLAND DELINEATION MAP

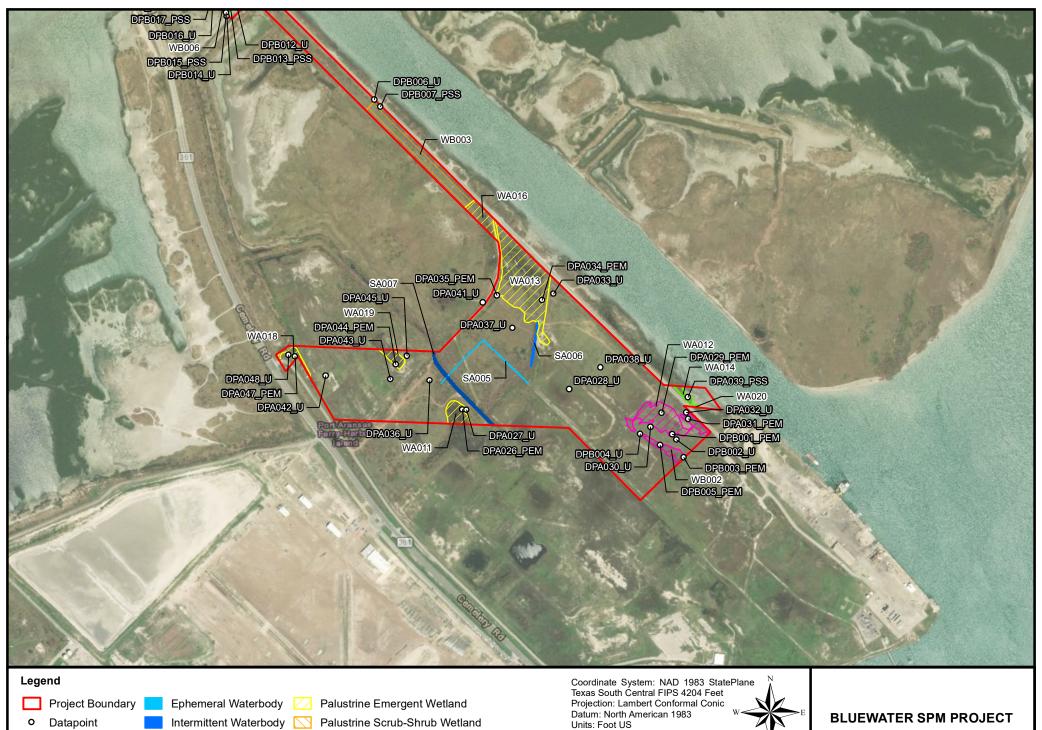
Estuarine Scrub-Shrub Wetland

Salt Flat

250 500

1,000 Feet

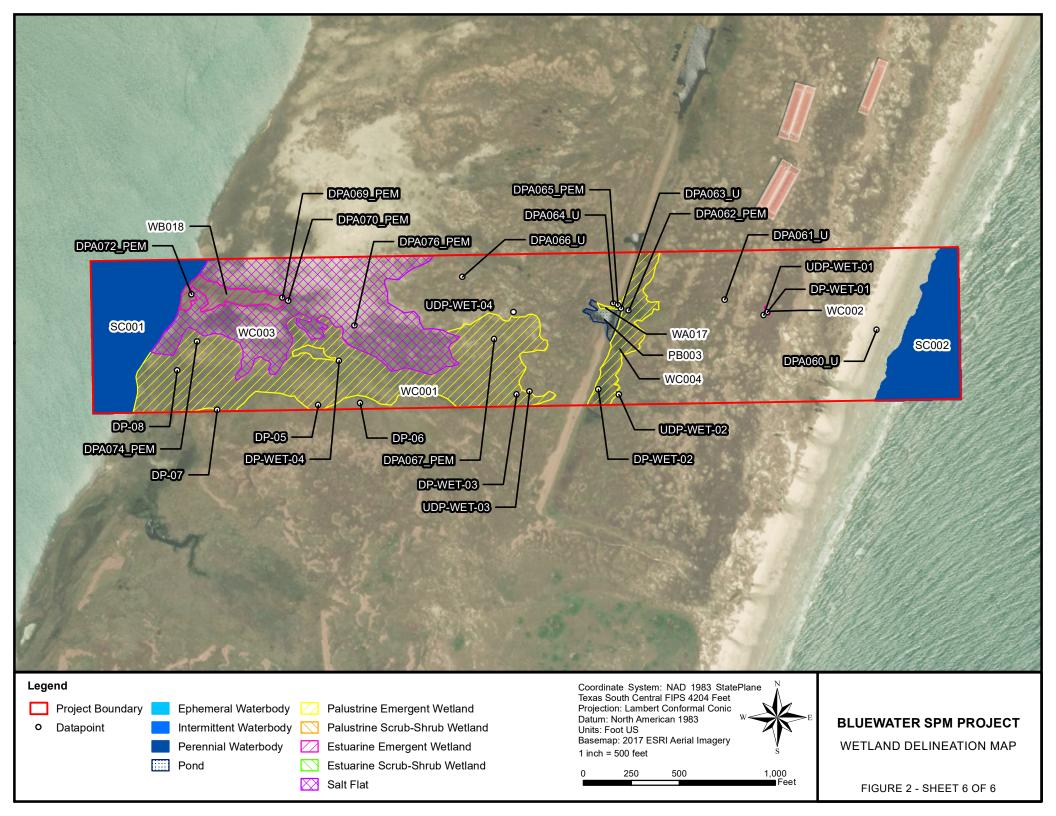
FIGURE 2 - SHEET 4 OF 6



Basemap: 2017 ESRI Aerial Imagery WETLAND DELINEATION MAP Perennial Waterbody **Estuarine Emergent Wetland** 1 inch = 833 feet Pond Estuarine Scrub-Shrub Wetland 250 500 1,000 Feet

Salt Flat

FIGURE 2 - SHEET 5 OF 6



APPENDIX B

Wetland Delineation Data Sheets

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site:	Blue	ewater SPM	C	County:	San Patricio	Sampling	Date∙ .la	nuary 29, 2	2010
Applicant/Owner:		Lloyd Enginee		Stat			Point:	DPA001	
Investigator(s):	E. Munscher			Section, Township		<u>oxao</u> campio i	N/A	<u> </u>	<u> </u>
Landform (hillslope, ter				Local relief (conca		e): None	Slope (%):		0-5
Subregion (LRR or MLI		Т		Lat: <u>27.9</u>			- · · · · / 8 Datum:	North Americ	can Datum 1983
Soil Map Unit Name:	Mustang fine	sand, 0 to 1 percen						N/A	
Are climatic / hydrologic	conditions on the	site typical for this	time of year?	(Yes / No)	No (if no, explain in Re	marks.)		
Are Vegetation	No ,Soil Yes	s,or Hydrology	Nosignific	antly disturbed?	Are "Normal Circ	cumstances" prese	nt? Yes	X No	
Are Vegetation	No ,Soil No	or Hydrology,	Nonatural	lly problematic?	(If nee	eded, explain any a	nswers in Rem	narks.)	
SUMMARY OF F	INDINGS - At	tach site mar	showing sa	ampling poin	t locations,	transects, im	portant fea	atures, (etc.
		<u>-</u>		1			•		
Hydrophytic Vegetatio	n Present?	Vac	No X						
Hydric Soil Present?		Yes Yes	No X	Is the Samp	led Area				
Wetland Hydrology Pr		Yes	No X	within a We		Yes	No	X	
Wolland Hydrology Fr	ooone.								-
Remarks:				•					
This point was de	rermined not to be	within a wetland du	ie to the lack of al	ll three wetland cr	iteria				
This point was de	errillied flot to be	within a wettand de	ie to the lack of all	ii tillee wetiand ci	iteria.				
The survey area v	vas determined to	be wetter than norn	nal at the time of s	survey.					
,				,					
HADBOLOCA									
HYDROLOGY Wetland hydrolo	av Indicators:								
-	-	is required; check a	all that apply)			Secondary Indicator		two requir	<u>'ea)</u>
Surface Wa	`	is required, check a	,	(B13)		Surface Soil (e Surface	(B9)
High Water	` ,		_ Aquatic Fauna (Marl Deposits (E		_	Sparsely veg Drainage Pat	etated Concav	e Suriace	(60)
Saturation (, ,		Hydrogen Sulfid		_	Moss Trim Lii			
Water Mark				spheres on Living	Roots(C3)		Nater Table (C	:2)	
	eposits (B2)		Presence of Rec			Crayfish Burn	•	, <u>_</u>)	
Drift Deposi			-	duction in Tilled S	oils (C6)		sible on Aerial	Imagery (C	. 9)
Algal Mat o	, ,		Thin Muck Surfa			Geomorphic I		inagory (c	,,,
Iron Deposi			Other (Explain i	, ,	_	Shallow Aquit			
	visible on Aerial Im	 nagery (B7)	. Other (Explain)	ii rtomanto)	_	FAC-Neutral			
	ned Leaves (B9)	lagory (B1)			_		oss (D8) (LRR	R T. U)	
	200100 (20)				_	Opinagina	(20) (21	, .,	
Field Observations:									
Surface Water Preser	ıt? Yes	NoX	Depth (inches	s): <u>N/A</u>					
Water Table Present?	Yes	NoX	Depth (inches	s): <u>>20</u>					
Saturation Present?	Yes	NoX	Depth (inches	s): >20	Wetland Hydro	ology Present?	Yes	_ No	X
(includes capillary frin	ge)								
Describe Recorde	d Data (stream ga	uge, monitoring we	II, aerial photos, p	revious inspection	ns), if available:				
Remarks:									
Remarks.									
No positive indica	tion of wetland hyd	Irology was observe	ed.						
·	,	0,7							

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft)	% cover	Species?	Status	Number of Dominant Species	
4. None Observed		_/0 COVEI	Орескез:	Otatus	·	(4)
					That Are OBL, FACW, or FAC.	(A)
2						
3					Total Number of Dominant	
4					Species Across All Strata: 1	(B)
5						
6					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC: 0	(A/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)		•		Prevalence Index Worksheet:	
None Observed					Total % Cover of: Multiply by:	
2						
3.					FACW species	
4					FAC species 0 x 3 = 0	
5					FACU species x 4 = 380	
6					UPL species 5 x 5 = 25	
		0	= Total Cover		Column Totals:100 (A)405	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:			•		Prevalence Index = B/A = 4.05	
1. None Observed						
_					Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
4					2 - Dominance Test is >50%	
5					3 - Prevalence Index is ≤ 3.0 ¹	
6					Problematic Hydrophytic Vegetation ¹ (Explain)	
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)		·		be present, unless disturbed or problematic.	
1. Cynodon dactylon		80	Yes	FACU	Definitions of Five Vegetation Strata:	
Schizachyrium scoparium		10	No	FACU	Tree - Woody plants, excluding woody vines,	
3. Cirsium texanum		5	No	UPL_	approximately 20 ft (6m) or more in height and 3 in.	
4. Sporobolus indicus		5	No	FACU_	(7.6 cm) or larger in diameter at breast height (DBH).	
5					O and the second and an extended the second and the	
6					Sapling - Woody plants, excluding woody vines,	
7					approximately 20 ft (6 m) or more in height and less	
8					than 3 in. (7.6 cm) DBH.	
9.						
10.					Shrub - Woody plants, excluding woody vines,	
					approximately 3 to 20 ft (1 to 6 m) in height.	
11		400	T-1-1-0		11 , 1 , 1 , 1 , 3	
			= Total Cover	00	Herb - All herbaceous (non-woody) plants, including	
	50% of total cover:	50	20% of total cover:	20	herbaceous vines, regardless of size, and woody	
Woody Vine Stratum (Plot size:	30 ft)					
1. None Observed					plants, except woody vines, less than approximately	
2					3 ft (1 m) in height.	
3						
4.	_				Woody vine - All woody vines, regardless of height.	
5.						
·-			= Total Cover		Hydrophytic	
	50% of total cover:		20% of total cover:	0	Vegetation	
	50 % Of total cover.		20% Of total cover.		_	
					Present? Yes NoX	
Remarks: (if observed, list m	orphological adaptati	ons below).			
No positive indication of hydro	ophytic vegetation wa	as observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).	
- F	, ,		,	F	· - -· -··-·,·	

	•	to the dept	h needed to doo			onfirm the abs	ence of indicators	.)
Depth (inches)	Matrix Color (moist)	0/	Color (moist)		Features Type ¹	Loc ²	Toyture	Domarka
(inches)	Color (moist)	<u>%</u>	Color (moist)		Type'		Texture	Remarks
0-16	7.5YR 3/2	<u>100</u>	None				Clay Loam	Disturbed soils
4								
	oncentration, D=De					² Location: P	L=Pore Lining, M=N	•
Hydric Soils	Indicators: (Appl	licable to all			-			roblematic Hydric Soils ³ :
Histoso					Surface (S8) (L	· · · · · · · · · · · · · · · · · · ·		(A9) (LRR O)
Histic E	pipedon (A2)		Thin D	Oark Surfac	e (S9) (LRR S,	T, U)	2 cm Muck	(A10) (LRR S)
Black H	istic (A3)		Loamy	y Mucky Mir	neral (F1) (LRR	O)	Reduced Ve	ertic (F18) (outside MLRA 150A,B)
Hydroge	en Sulfide (A4)		Loamy	y Gleyed Ma	atrix (F2)		Piedmont F	oodplain Soils (F19) (LRR P, S, T)
Stratifie	d Layers (A5)		Deple	ted Matrix (F3)		Anomalous	Bright Loamy Soils (F20)
Organic	Bodies (A6) (LRR	P, T, U)	Redox	Dark Surfa	ace (F6)		(MLRA 153	B)
5 cm Mi	ucky Mineral (A7) (I	RR P, T, U)	Deple	ted Dark Sเ	urface (F7)		Red Parent	Material (TF2)
Muck P	resence (A8) (LRR	U)	Redox	d Depressio	ns (F8)		Very Shallo	w Dark Surface (TF12)
1 cm Mi	uck (A9) (LRR P, T))	Marl (I	F10) (LRR	U)		Other (Expl	ain in Remarks)
Deplete	d Below Dark Surfa	ice (A11)	Deple	ted Ochric ((F11) (MLRA 1	51)	_	
Thick D	ark Surface (A12)		Iron-M	langanese	Masses (F12)	LRR O, P, T)		s of hydrophytic vegetation and
Coast P	rairie Redox (A16)	(MLRA 150A	() Umbri	c Surface (F13) (LRR P, T	, U)		ydrology must be present, sturbed or problematic.
Sandy N	Mucky Mineral (S1)	(LRR O, S)	Delta	Ochric (F17	7) (MLRA 151)		unicas un	starbed of problematic.
Sandy 0	Gleyed Matrix (S4)		Reduc	ced Vertic (I	F18) (MLRA 15	0A, 150B)		
Sandy F	Redox (S5)		Piedm	ont Floodp	lain Soils (F19)	(MLRA 149A)		
Stripped	d Matrix (S6)		Anoma	alous Brigh	t Loamy Soils (I	20) (MLRA 14	9A, 153C, 153D)	
Dark Sເ	ırface (S7) (LRR P,	S, T, U)						
Restrictive I	_ayer (if observed)):						
Type:								
Depth (in	ches):					Hydrid	c Soil Present? Y	es NoX
Remarks:								
NI itio - i		-:	d					
No positive ir	ndication of hydric s	oiis was obs	ervea.					
Soils disturbe	ed by broken glass/	gravel.						

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site:	1	Bluewater SPM		County:	San Patri	cio	Sampling Date:	January 29, 2019
Applicant/Owner:		Lloyd Enginee			ate:	Texas	Sample Point:	•
Investigator(s):	E. Munsche	· · · · ·	J. Mitchell	Section, Towns	_		· N/A	_
Landform (hillslope, ter				Local relief (cor		. none):		pe (%): 0-5
Subregion (LRR or MLI	RA):	T		Lat: <u>27</u>		· · · · · · · · · · · · · · · · · · ·		Datum: North American Datum 1983
Soil Map Unit Name:			Dianola soils				assification:	N/A
Are climatic / hydrologic	c conditions on	the site typical for this		(Yes / No)	No		xplain in Remarks.	
Are Vegetation		No ,or Hydrology	•	· / —		`	nces" present?	•
Are Vegetation		No ,or Hydrology		ally problematic?			xplain any answers	
				• •				not footuwee ato
SUMMART OF F	INDINGS -	Attach Site map	snowing s	ampling po	int locatio	ns, trans	ects, importa	ant features, etc.
Hydrophytic Vegetation	on Present?	Yes X	No					
Hydric Soil Present?		Yes X		Is the San	pled Area			
Wetland Hydrology Pi	resent?	Yes X	No	within a W	-	Ye	s X	No
Remarks:								
·		within a wetland due to			teria.			
HYDROLOGY								
Wetland hydrolo	gy Indicators:					Second	ary Indicators (min	imum of two required)
Primary Indicators	(minimum of c	one is required; check a	ll that apply)				urface Soil Cracks	· · · · · · · · · · · · · · · · · · ·
X Surface Wa	•	,	Aquatic Fauna	(B13)				Concave Surface (B8)
—— High Water			· ·	(B15) (LRR U)			rainage Patterns (, ,
X Saturation (Hydrogen Sulf				loss Trim Lines (B	•
Water Mark			· ·	ospheres on Livir	na Roots(C3)		ry-Season Water ⁻	*
l —	eposits (B2)			educed Iron (C4)			rayfish Burrows (C	, ,
Drift Depos				eduction in Tilled				n Aerial Imagery (C9)
	r Crust (B4)		Thin Muck Sur		()		Geomorphic Positio	, ,
Iron Deposi	, ,		Other (Explain				hallow Aquitard (D	, ,
	Visible on Aeria	al Imagery (B7)	Othor (Explain	iii rtomano)			AC-Neutral Test (•
	ned Leaves (B9						phagnum moss (D	•
	.04 204,00 (20	,				— "	pagaeee (2	o, (= , o,
Field Observations:								
Surface Water Preser	nt? Yes	X No	Depth (inche	es): 1				
Water Table Present?			Depth (inche	<i>'</i>				
Saturation Present?		X No	Depth (inche	<i>'</i> — —	Wetland	Hydrology F	Present? Yes	X No
(includes capillary frin			2004 (,		
Describe Recorde	d Data (stream	gauge, monitoring wel	l, aerial photos,	previous inspect	ions), if availa	ble:		
Remarks:								
A positive indication	on of wetland h	ydrology was observed	(at least one pr	imary indicator).				
A positive indication	on of wetland h	ydrology was observed	(at least two se	condary indicato	rs).			

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
<u>Tree Stratum</u> (Plot size: 30 ft.)% cover	Species?	Status	Number of Dominant Species	
1. None Observed				That Are OBL, FACW, or FAC:1	(A)
2					
3				Total Number of Dominant	
4				Species Across All Strata: 1	(B)
5					
6				Percent of Dominant Species	
	-	_= Total Cover		That Are OBL, FACW, or FAC:100	% (A/B)
		_ 20% of total cover:	0	Prevalence Index Worksheet:	
Sapling Stratum (Plot size: 30 ft.)				
1. None Observed		-			ultiply by:
2				OBL species x 1 = FACW species z5	<u>80</u>
3					0
4				FAC species	0
5				UPL species 0 x 5 =	0
6		= Total Cover		Column Totals: 105 (A)	(B
50% of		_ 20% of total cover:	0		(B
Shrub Stratum (Plot size: 30 ft.		_ 2070 Of total cover.		Prevalence Index = B/A =	1.24
1. None Observed					
2.				Hydrophytic Vegetation Indicators:	
3.				1 - Rapid Test for Hydrophytic Veget	ation
4.				X 2 - Dominance Test is >50%	
5.		<u> </u>		X 3 - Prevalence Index is ≤ 3.0 ¹	
6.				Problematic Hydrophytic Vegetation ¹	(Explain)
	0	_= Total Cover			
50% of	f total cover: 0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrolo	gy must
Herb Stratum (Plot size: 30 ft.)			be present, unless disturbed or problematic.	
Borrichia frutescens	80	Yes	OBL	Definitions of Five Vegetation Strata:	
2. Andropogon glomeratus	10	No	FACW	Tree - Woody plants, excluding woody vines,	
3. Lycium carolinianum	15	No	FACW	approximately 20 ft (6m) or more in height and	
4				(7.6 cm) or larger in diameter at breast height	(DBH).
5				Sapling - Woody plants, excluding woody vin	100
6				approximately 20 ft (6 m) or more in height an	
7				than 3 in. (7.6 cm) DBH.	u 1033
8				anan o mi (i io omi) DDi n	
9		-		Shrub - Woody plants, excluding woody vines	S,
0 1.		-		approximately 3 to 20 ft (1 to 6 m) in height.	
	105	= Total Cover			
50% of		20% of total cover:	21	Herb - All herbaceous (non-woody) plants, inc	cluding
Woody Vine Stratum (Plot size: 30				herbaceous vines, regardless of size, and woo	ody
1. None Observed	,			plants, except woody vines, less than approxi	mately
2.				3 ft (1 m) in height.	
3.					
4.				Woody vine - All woody vines, regardless of	height.
5					
	0	_= Total Cover		Hydrophytic	
50% of	f total cover: 0	20% of total cover:	0	Vegetation	
				Present? Yes X No	
				1	

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Depth	Matrix			Redox F	eatures			
inches)	Color (moist)	%	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks
0-16	10YR 6/2	98	10YR 5/8	2	C		Sandy Clay	
								
Type: C=C	 Concentration, D=Dep	oletion RM=	Reduced Matrix N	 //S=Maske	d Sand Grains	² I ocation: F	L=Pore Lining, M=Matri	ix
	Is Indicators: (Appl	•				2004		lematic Hydric Soils ³ :
-	ol (A1)				Surface (S8) (L	.RR S. T. U)	1 cm Muck (A9)	
	Epipedon (A2)				e (S9) (LRR S ,		2 cm Muck (A10	•
	Histic (A3)				neral (F1) (LRF	· ·		(F18) (outside MLRA 150A,
	gen Sulfide (A4)			Gleyed Ma	, , ,	. •,		plain Soils (F19) (LRR P, S,
	ied Layers (A5)			ed Matrix (ht Loamy Soils (F20)
	ic Bodies (A6) (LRR l	P. T. U)		Dark Surfa	,		(MLRA 153B)	25411, 55115 (1 20)
	Mucky Mineral (A7) (L				urface (F7)		Red Parent Mat	erial (TF2)
	Presence (A8) (LRR	· · · · · · · ·		Depressio				ark Surface (TF12)
	Muck (A9) (LRR P, T)	•		10) (LRR			Other (Explain i	, ,
	ted Below Dark Surfa				(F11) (MLRA 1 :	51)	Other (Explain)	ii Romano,
	Dark Surface (A12)	(/ (1)			Masses (F12)	=	³ Indicators of	hydrophytic vegetation and
	Prairie Redox (A16)	(MI RA 150		-	F13) (LRR P, T			ology must be present,
	Mucky Mineral (S1)	•	· —		7) (MLRA 151)	, -,		ped or problematic.
	Gleyed Matrix (S4)	, 0, 0)			F18) (MLRA 151)	OA. 150B)		
	Redox (S5)				lain Soils (F19)			
	ed Matrix (S6)				, ,	-	9A, 153C, 153D)	
	Layer (if observed)	-						
Type:								
						Hydri	c Soil Present? Yes	X No
Type: Depth (ii						Hydri	c Soil Present? Yes	X No
Type: Depth (in	nches):					Hydri	c Soil Present? Yes _	X No
Type: Depth (in						Hydri	c Soil Present? Yes _	X No
Type: Depth (in	nches):					Hydri	c Soil Present? Yes _	X No
Type: Depth (in	nches):					Hydri	c Soil Present? Yes _	X No
Type: Depth (in	nches):					Hydri	c Soil Present? Yes _	X No
Type: Depth (in	nches):					Hydri	c Soil Present? Yes _	X No
Type: Depth (in	nches):					Hydri	c Soil Present? Yes _	XNo
Type: Depth (in	nches):					Hydri	c Soil Present? Yes _	X No
Type: Depth (in	nches):					Hydri	c Soil Present? Yes _	X No
Type: Depth (in	nches):					Hydri	c Soil Present? Yes	X No
Type: Depth (in	nches):					Hydri	c Soil Present? Yes	X No
Type: Depth (in	nches):					Hydri	c Soil Present? Yes	X No
Type: Depth (in	nches):					Hydri	c Soil Present? Yes	X No
Type: Depth (ii	nches):					Hydri	c Soil Present? Yes	X No
Type: Depth (ii	nches):					Hydri	c Soil Present? Yes	X No
Type: Depth (ii	nches):					Hydri	c Soil Present? Yes	X No
Type: Depth (ii	nches):					Hydri	c Soil Present? Yes	X No
Type: Depth (in	nches):					Hydri	c Soil Present? Yes	X No
Type: Depth (in	nches):					Hydri	c Soil Present? Yes	X No
Type: Depth (ii	nches):					Hydri	c Soil Present? Yes	X No
Type: Depth (in	nches):					Hydri	c Soil Present? Yes	X No
Type: Depth (in	nches):					Hydri	c Soil Present? Yes	X No

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site:		Bluewater SPM		County:	San Patri	icio	Sampling D	ate: J	January 29, 2019
Applicant/Owner:		Lloyd Engir	eering		State:	Texas	Sample Po		
Investigator(s):	E. Munsche	er and _	J. Mitchell	Section, Town	nship, Range:			N/A	<u>-</u>
Landform (hillslope, terra	ace, etc.):		Э	Local relief (c	oncave, convex	, none):	None	Slope (%)	: 0-5
Subregion (LRR or MLR	A.\				27.902071			Datun	North American Datum 1983
Soil Map Unit Name:			Dianola soils			NWIC	Classification:		PEM1A
Are climatic / hydrologic	conditions or	the site typical for th	nis time of year?	(Yes / No)	No	(if no,	explain in Rem	arks.)	
Are Vegetation	No,Soil	No ,or Hydrolog	y <u>No</u> signi	ficantly disturbe	d? Are "Norm	al Circumst	ances" present	? Yes	X No
Are Vegetation	No,Soil	No ,or Hydrolog	y <u>No</u> natu	rally problemation	?	(If needed,	explain any ans	wers in Re	marks.)
SUMMARY OF FI	NDINGS -	- Attach site ma	ap showing s	sampling p	oint locatio	ns. tran	sects. imp	ortant fe	eatures, etc.
			- I	1 31					
Hydrophytic Vegetation	Present?	Yes	No X						
Hydric Soil Present?	10	Yes	No X		ampled Area			N	v
Wetland Hydrology Pre	sent?	Yes	NoX	. within a	Wetland?	Y	es	No	X
Remarks:									
This point was dete	rmined not to	be within a wetland	due to the lack of	all three wetlan	d criteria.				
T1									
i ne survey area wa	is determined	d to be wetter than no	ormai at the time t	or survey.					
HYDROLOGY									
Wetland hydrolog	y Indicators:	:				Secon	dary Indicators	(minimum	of two required)
Primary Indicators	minimum of o	one is required; chec	k all that apply)				Surface Soil Cr	acks (B6)	
Surface Wat	er (A1)		Aquatic Faun	a (B13)			Sparsely Veget	ated Conca	ave Surface (B8)
High Water 1	able (A2)		Marl Deposits	s (B15) (LRR U)			Drainage Patte	rns (B10)	
Saturation (A	.3)	_	Hydrogen Sul	lfide Odor (C1)			Moss Trim Line	es (B16)	
Water Marks	(B1)		Oxidized Rhiz	zospheres on Li	ving Roots(C3)		Dry-Season W	ater Table ((C2)
Sediment De	posits (B2)		Presence of F	Reduced Iron (C	(4)		Crayfish Burrov	vs (C8)	
Drift Deposits	s (B3)		Recent Iron R	Reduction in Tille	ed Soils (C6)		Saturation Visil	ole on Aeria	al Imagery (C9)
Algal Mat or	Crust (B4)		Thin Muck Su	urface (C7)			Geomorphic Po	osition (D2)	
Iron Deposits	(B5)		Other (Explain	n in Remarks)			Shallow Aquita	rd (D3)	
Inundation V	sible on Aeria	al Imagery (B7)					FAC-Neutral To	est (D5)	
Water-Staine	ed Leaves (B	9)					Sphagnum mos	ss (D8) (LR	RT, U)
Field Observations:									
Surface Water Present	? Yes _	NoX	Depth (inch	ies): <u>N/A</u>					
Water Table Present?	Yes		Depth (inch						
Saturation Present?	Yes _	NoX	Depth (inch	ies): <u>>20</u>	Wetland	Hydrology	Present?	'es	NoX
(includes capillary fring	,								
Describe Recorded	Data (stream	n gauge, monitoring v	well, aerial photos	, previous inspe	ctions), if availa	ıble:			
Damada.									
Remarks:									
No positive indicati	on of wetland	hydrology was obse	rved						
140 positive indicati	ni oi wellana	Trydrology was obse	i vou.						

Absolute Dominant Indicator
1. None Observed 2.
3. 4. 5. 5. 2. (B) 5. 0. = Total Cover Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B) Sapling Stratum (Plot size: 30 ft.) Prevalence Index Worksheet: Total % Cover of: Multiply by: 1. None Observed OBL species 10 x 1 = 10 Prevalence Index Worksheet: Prevalence Index Worksheet: Multiply by: Multiply by: OBL species 10 x 1 = 10 Prevalence Index Worksheet: Prevalence In
3. 4. 5. 5. 2. (B) 5. 0. = Total Cover Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B) Sapling Stratum (Plot size: 30 ft.) Prevalence Index Worksheet: Total % Cover of: Multiply by: 1. None Observed OBL species 10 x 1 = 10 Prevalence Index Worksheet: Prevalence Index Worksheet: Multiply by: Multiply by: OBL species 10 x 1 = 10 Prevalence Index Worksheet: Prevalence In
4
5.
Percent of Dominant Species That Are OBL, FACW, or FAC: \$50% (A/B)
That Are OBL, FACW, or FAC: 50% (A/B)
Prevalence Index Worksheet: Total % Cover of: Multiply by:
1. None Observed 1. None Observed 2. OBL species 10 x 1 = 10 FACW species 0 x 2 = 0 FAC species 25 x 3 = 75 FACU species 75 x 4 = 300 UPL species 0 x 5 = 0 Column Totals: 110 (A) 385 (B) FACU species 0 x 5 = 0 UPL species 0 x 5 = 0 Column Totals: 110 (A) 385 (B) FACU species 0 x 5 = 0 UPL species 0 x 5 = 0 FACU species 0 x 5 = 0 UPL species 0 x 5 = 0 FACU species 0 x 5 = 0 UPL species 0 x 5 = 0 FACU species 0 x 5 = 0 UPL species 0 x 5 = 0 FACU species 0 x 5 = 0 UPL species 0 x 5 = 0 FACU species 0 x 5 = 0 UPL species 0 x 5 = 0 FACU species 0 x 5 = 0 UPL species 0 x 5 = 0 FACU species 0 x 5 = 0 UPL species 0 x 5 = 0 FACU species 0 x 2 =
2. OBL species 10 x 1 = 10 3. FACW species 0 x 2 = 0 4. FAC species 25 x 3 = 75 5. FACU species 75 x 4 = 300 6. UPL species 0 x 5 = 0 Column Totals: 110 (A) 385 (B) Shrub Stratum (Plot size: 30 ft.) 15 Yes FAC 1. Schinus terebinthifolia 15 Yes FAC 2. Hydrophytic Vegetation Indicators: 3. 1 - Rapid Test for Hydrophytic Vegetation 4. 2 - Dominance Test is >50% 5. 3 - Prevalence Index is ≤ 3.0¹ Problematic Hydrophytic Vegetation ¹ (Explain)
3. 4. FACW species 0 x 2 = 0 0 4. 5. FAC species 25 x 3 = 75 75
3. 4. FACW species 0 x 2 = 0 0 4. 5. FAC species 25 x 3 = 75 75
5. FACU species 75 x 4 = 300 6. UPL species 0 x 5 = 0 Shrub Stratum (Plot size: 30 ft.) Prevalence Index = B/A = 3.50 (B) 2. Hydrophytic Vegetation Indicators: 3. 1 - Rapid Test for Hydrophytic Vegetation 4. 2 - Dominance Test is >50% 5. 3 - Prevalence Index is ≤ 3.0¹ Problematic Hydrophytic Vegetation¹ (Explain)
6.
Shrub Stratum (Plot size: 30 ft.) Prevalence Index = B/A = 3.50
50% of total cover: 0 20% of total cover: 0 Shrub Stratum (Plot size: 30 ft.) Prevalence Index = B/A = 3.50 1. Schinus terebinthifolia 15 Yes FAC Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 4. 2 - Dominance Test is >50% 5. 3 - Prevalence Index is ≤ 3.0¹ 6. Problematic Hydrophytic Vegetation¹ (Explain)
Shrub Stratum (Plot size:
1. Schinus terebinthifolia 15 Yes FAC 2. Hydrophytic Vegetation Indicators: 3. 1 - Rapid Test for Hydrophytic Vegetation 4. 2 - Dominance Test is >50% 5. 3 - Prevalence Index is ≤ 3.0¹ 6. Problematic Hydrophytic Vegetation¹ (Explain)
2. Hydrophytic Vegetation Indicators: 3. 1 - Rapid Test for Hydrophytic Vegetation 4. 2 - Dominance Test is >50% 5. 3 - Prevalence Index is ≤ 3.0¹ 6. Problematic Hydrophytic Vegetation¹ (Explain)
3. 1 - Rapid Test for Hydrophytic Vegetation 4. 2 - Dominance Test is >50% 5. 3 - Prevalence Index is ≤ 3.0¹ 6. Problematic Hydrophytic Vegetation¹ (Explain)
4. 2 - Dominance Test is >50% 5. 3 - Prevalence Index is ≤ 3.0¹ 6. Problematic Hydrophytic Vegetation¹ (Explain)
5. 3 - Prevalence Index is ≤ 3.0¹ 6. Problematic Hydrophytic Vegetation¹ (Explain)
6Problematic Hydrophytic Vegetation ¹ (Explain)
15 = Total Cover
50% of total cover: 7.5 20% of total cover: 3 Indicators of hydric soil and wetland hydrology must
Herb Stratum (Plot size: 30 ft.) be present, unless disturbed or problematic.
1. Cynodon dactylon 75 Yes FACU Definitions of Five Vegetation Strata:
2. Borrichia frutescens 10 No OBL Tree - Woody plants, excluding woody vines,
3. <u>Muhlenbergia schreberi</u> 10 No FAC approximately 20 ft (6m) or more in height and 3 in.
4 (7.6 cm) or larger in diameter at breast height (DBH).
5 Sapling - Woody plants, excluding woody vines,
0
<u> </u>
9 Shrub - Woody plants, excluding woody vines,
approximately 3 to 20 ft (1 to 6 m) in height
95 = Total Cover
50% of total cover: 47.5 20% of total cover: 19 Herb - All herbaceous (non-woody) plants, including
Woody Vine Stratum (Plot size: 30 ft.) herbaceous vines, regardless of size, and woody
1. None Observed plants, except woody vines, less than approximately
2. 3 ft (1 m) in height.
3
4. Woody vine - All woody vines, regardless of height.
5
·
0 = Total Cover Hydrophytic 50% of total cover: 0 20% of total cover: 0 Vegetation
0 = Total Cover Hydrophytic 50% of total cover: 0 20% of total cover: 0 Vegetation
0 = Total Cover Hydrophytic 50% of total cover: 0 20% of total cover: 0 Vegetation
0 = Total Cover 50% of total cover: 0 20% of total cover: 0 Vegetation Present? Yes No X

oepth nches) 0-16	Color (moist)	0/								
0-16		%_	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks		
	10YR 6/2	100	None				Sandy Clay			
						2	. 			
			=Reduced Matrix, N			² Location: P	L=Pore Lining, M=Matrix			
•	`	icable to a	all LRRs, unless ot		,		Indicators for Proble			
Histosol	` '				Surface (S8) (L		1 cm Muck (A9)	,		
	oipedon (A2)				e (S9) (LRR S ,		2 cm Muck (A10)	•		
Black His	, ,			•	neral (F1) (LRR	0)		F18) (outside MLRA 150A,B		
_ · ·	en Sulfide (A4)			Gleyed Ma	` ,			lain Soils (F19) (LRR P, S, T)		
	d Layers (A5)	D T II\		ed Matrix (,			t Loamy Soils (F20)		
Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U)				Dark Surfa	ırface (F7)		(MLRA 153B) Red Parent Mate	riol (TE2)		
Muck Presence (A8) (LRR U)			· — '	Depressio				rk Surface (TF12)		
	ick (A9) (LRR P, T)	•		10) (LRR I	` ,		Other (Explain in	, ,		
	d Below Dark Surfa			, .	'F11) (MLRA 1 9	51)	Other (Explain III	rtemarks)		
	ark Surface (A12)	00 (/111)		`	Masses (F12) (•	³ Indicators of h	nydrophytic vegetation and		
	rairie Redox (A16)	(MLRA 15		•	F13) (LRR P, T			ogy must be present,		
	lucky Mineral (S1)	•	· —	•	') (MLRA 151)	, -,	unless disturbe	ed or problematic.		
	Gleyed Matrix (S4)	(•	=18) (MLRA 15	0A, 150B)				
	Redox (S5)			,	ain Soils (F19)					
	Matrix (S6)				, ,	•	9A, 153C, 153D)			
Dark Su	rface (S7) (LRR P,	S, T, U)								
estrictive L	.ayer (if observed)									
Type:	,									
	ches):					Hydrid	Soil Present? Yes _	No X		
Dopan (into						11,4.11				
lemarks:						!				

Project/Site:			County: San Patricio Sampling Date: January 29, 2019								
Applicant/Owner:		Bluewater SPM Lloyd Enginee			ite:	Texas			DPA004_PEM		
Investigator(s):	E. Munsche	, , , , , , , , , , , , , , , , , , ,	J. Mitchell	Section, Township			- '	N/A			
Landform (hillslope, ter	race, etc.):		ater	Local relief (cond	ave, convex, r	none):	None	Slope (%):	0-5		
Subregion (LRR or MLI	RA):	Т						Datum:	North American Datum 1983		
Soil Map Unit Name:			Dianola soils	-		NWI Cla	assification:		N/A		
Are climatic / hydrologic	c conditions on	the site typical for this	time of year?	(Yes / No)	No	(if no, ex	plain in Rema	arks.)			
Are Vegetation	No ,Soil	No ,or Hydrology	No signifi	icantly disturbed?	Are "Normal	Circumstar	nces" present?	? Yes	X No		
Are Vegetation	No ,Soil_	No ,or Hydrology	No natura	ally problematic?	(If	needed, ex	plain any ans	wers in Rem	narks.)		
SUMMARY OF F	INDINGS	- Attach site map	showina s	ampling poir	nt location	s. trans	ects. impo	ortant fea	atures, etc.		
		•									
Hydrophytic Vegetatio	n Present?	Yes X	No	la tha Cama							
Hydric Soil Present?	raaant?	Yes X Yes X	No	Is the Samp		Va	. v	Na			
Wetland Hydrology Pi	esent?	Yes <u>X</u>	No	within a We	etiano ?	Yes	s <u>X</u>	NO			
Remarks:											
This point was de	ermined to be	within a wetland due to	the presence of	f all 3 wetland crite	eria.						
				_							
I he survey area v	vas determined	d to be wetter than norn	nal at the time of	survey.							
HYDROLOGY											
Wetland hydrolo	gy Indicators:	:				Seconda	ary Indicators	(minimum of	f two required)		
Primary Indicators	(minimum of c	one is required; check a	ill that apply)			Sı	urface Soil Cra	acks (B6)			
X Surface Wa	iter (A1)	X_	Aquatic Fauna	(B13)		_ X _ S _I	parsely Vegeta	ated Concav	ve Surface (B8)		
High Water	Table (A2)		Marl Deposits	(B15) (LRR U)		Dı	rainage Patter	ns (B10)			
X Saturation ((A3)		Hydrogen Sulf	lfide Odor (C1) Moss Trim Lines (B16)							
Water Mark	:s (B1)		Oxidized Rhizo	ospheres on Living	Roots(C3)	Dr	ry-Season Wa	iter Table (C	;2)		
Sediment D	eposits (B2)		Presence of R	educed Iron (C4)		Cr	rayfish Burrow	rs (C8)			
Drift Depos	its (B3)		Recent Iron Re	eduction in Tilled S	Soils (C6)	Sa	aturation Visib	le on Aerial	Imagery (C9)		
Algal Mat o	r Crust (B4)		Thin Muck Sur	face (C7)		G	eomorphic Po	sition (D2)			
Iron Deposi	ts (B5)		Other (Explain	in Remarks)		SI	nallow Aquitar	d (D3)			
Inundation '	√isible on Aeria	al Imagery (B7)				_X_ F/	AC-Neutral Te	st (D5)			
Water-Stair	ned Leaves (B9	9)				S _I	ohagnum mos	s (D8) (LRR	≀ T, U)		
					1						
Field Observations:											
Surface Water Preser	nt? Yes	No	Depth (inche	es): <u>0.5</u>							
Water Table Present?		NoX	Depth (inche								
Saturation Present?		No	Depth (inche	es): <u> </u>	Wetland Hy	ydrology P	resent? Y	es <u>X</u>	_ No		
(includes capillary frin	<u> </u>										
Describe Recorde	d Data (stream	n gauge, monitoring we	II, aerial photos,	previous inspection	ons), if availabl	e:					
Remarks:											
A positive indication	on of wetland h	nydrology was observed	l (at least one pr	imary indicator).							
		.,	. (р.	, ,.							
A positive indication	on of wetland h	nydrology was observed	I (at least two se	condary indicators	s).						
'		, 3,	•	,	,						
Aquatic Fauna: fis	sh.										
'											

Sampling Point:	DPA004_PEM

		Absolute	Dominant	Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size:	30 ft.)	% cover	Species?	Status	Number of Dominant Species		
4. Name Observed					That Are OBL, FACW, or FAC: 2		(A)
2							(* •)
					Total Number of Dominant		
3			·				(B)
4					Species Across Air Strata.		(D)
5					Demont of Demoir out Consider		
6	 				Percent of Dominant Species	,	(A (D)
	500/ 51 1		= Total Cover	•	That Are OBL, FACW, or FAC: 100%	0	(A/B)
	50% of total cover:	0	20% of total cover:	0	Prevalence Index Worksheet:		
Sapling Stratum (Plot size:	30 ft.)						
1. None Observed						ultiply by:	
2					OBL species 95 x 1 =	95	
3					FACW species 5 x 2 =	10	
4					FAC species 0 x 3 =	0	
5					FACU species15 x 4 =	60	
6					UPL species 5 x 5 =	25	
		0	= Total Cover		Column Totals:120 (A)	190	(B)
	50% of total cover:	0	20% of total cover:	0			
Shrub Stratum (Plot size:					Prevalence Index = B/A =	1.58	
					Hadran kadis Wanadadian kadisadan		
2					Hydrophytic Vegetation Indicators:		
3.					1 - Rapid Test for Hydrophytic Vegeta	ation	
4					X 2 - Dominance Test is >50%		
5					X 3 - Prevalence Index is ≤ 3.0 ¹		
6					Problematic Hydrophytic Vegetation ¹ ((Explain)	
		0	= Total Cover				
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrolog	gy must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.		
Borrichia frutescens		70	Yes	OBL	Definitions of Five Vegetation Strata:		
2. Cynodon dactylon		15	No	FACU	Tree - Woody plants, excluding woody vines,		
3. Distichlis littoralis		 25	Yes	OBL	approximately 20 ft (6m) or more in height and	3 in.	
4. Opuntia engelmannii		 5	No	UPL	(7.6 cm) or larger in diameter at breast height (
5. Andropogon glomeratus		 5	No	FACW		,	
6					Sapling - Woody plants, excluding woody vine	es,	
7					approximately 20 ft (6 m) or more in height and	d less	
					than 3 in. (7.6 cm) DBH.		
8					,		
9					Shrub - Woody plants, excluding woody vines.		
10					31 7 3	,	
11					approximately 3 to 20 ft (1 to 6 m) in height.		
			= Total Cover		Harb All barbacous (non woody) plants in al	ludin~	
	50% of total cover:	60	20% of total cover:	24	Herb - All herbaceous (non-woody) plants, incl	•	
Woody Vine Stratum (Plot size:	30 ft)				herbaceous vines, regardless of size, and woo	-	
1. None Observed					plants, except woody vines, less than approxin	nately	
2					3 ft (1 m) in height.		
3							
4					Woody vine - All woody vines, regardless of h	neight.	
5.							
	<u> </u>	0	= Total Cover		Hydrophytic		
	50% of total cover:	0	20% of total cover:	0	Vegetation		
					Present? Yes X No		
					Troscitt.		
Remarks: (if observed, list m	ornhological adaptati	ons helow	\ \				
iveillaive: (ii oneelved, list III	orpriological adaptati	OIIS DEIUW	<i>)</i> -				
A positive indication of hydrop	ohytic vegetation was	observed	(>50% of dominant	species index	xed as OBL, FACW, or FAC).		
A positive indication of hydrop	ohytic vegetation was	observed	(Prevalence Index is	s ≤ 3.00).			

epth	Matrix			Redox F	eatures				
inches)	Color (moist)	%	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks	
0-16	10YR 6/2	_95_	10YR 5/8	5	C	PL	Sandy Clay		
Type: C=C	oncentration, D=De	oletion, RM=	Reduced Matrix, N	//S=Maske	d Sand Grains.	² Location: F	PL=Pore Lining, M=Matrix		
lydric Soils	s Indicators: (Appl	icable to al	I LRRs, unless of	herwise n	oted.)		Indicators for Proble	ematic Hydric Soils ³ :	
Histoso	l (A1)		Polyva	lue Below	Surface (S8) (LI	RR S, T, U)	1 cm Muck (A9)	(LRR O)	
Histic E	pipedon (A2)		Thin D	ark Surfac	e (S9) (LRR S , ⁻	Γ, U)	2 cm Muck (A10)	(LRR S)	
Black H	listic (A3)			-	neral (F1) (LRR	O)	Reduced Vertic (F18) (outside MLRA 150A,B	
Hydrog	en Sulfide (A4)		Loamy	Gleyed Ma	atrix (F2)		Piedmont Floodp	lain Soils (F19) (LRR P, S, T	
	ed Layers (A5)		Deplet	ed Matrix (F3)		Anomalous Brigh	t Loamy Soils (F20)	
	Bodies (A6) (LRR			ace (F6)		(MLRA 153B)			
5 cm M	ucky Mineral (A7) (I	RR P, T, U	Deplet	ed Dark Sเ	urface (F7)		Red Parent Material (TF2)		
Muck Presence (A8) (LRR U) Redox Depressions (F8)							Very Shallow Da	rk Surface (TF12)	
1 cm M	uck (A9) (LRR P, T))	Marl (F	10) (LRR	U)		Other (Explain in	Remarks)	
Deplete	ed Below Dark Surfa	ice (A11)	Deplet	ed Ochric ((F11) (MLRA 15	1)	•		
Thick D	ark Surface (A12)		Iron-M	LRR O, P, T)		nydrophytic vegetation and			
Coast F	Prairie Redox (A16)	(MLRA 150	A) Umbrid	Surface (F13) (LRR P, T,	U)	•	logy must be present, ed or problematic.	
Sandy I	Mucky Mineral (S1)	(LRR O, S)	Delta (Ochric (F17	7) (MLRA 151)		uniess disturbi	ed of problematic.	
Sandy (Gleyed Matrix (S4)		Reduc	ed Vertic (I	F18) (MLRA 150)A, 150B)			
X Sandy F	Redox (S5)		Piedm	ont Floodp	lain Soils (F19) (MLRA 149A)			
Stripped	d Matrix (S6)		Anoma	alous Brigh	t Loamy Soils (F	20) (MLRA 14	9A, 153C, 153D)		
Dark Su	urface (S7) (LRR P,	S, T, U)							
Restrictive I	Layer (if observed)):							
Type:									
Depth (in						Hydri	c Soil Present? Yes _	X No	
Remarks:									
Kemarks.									
opositive inc	dication of hydric so	il was obser	ved.						

Project/Site:	F	Bluewater SPM		County:	San Patricio	Sampling	Date: Ja	anuary 29, 2019
Applicant/Owner:		Lloyd Engin	eerina	Sta			Point:	
Investigator(s):		er and		Section, Townshi			N/A	
Landform (hillslope, te				Local relief (conc	· · · —	ie): None	Slope (%):	0-5
Subregion (LRR or ML				,		ng:	- ' ' '	
Soil Map Unit Name:			Dianola soils			NWI Classification:		N/A
Are climatic / hydrolog	ic conditions on	the site typical for th		(Yes / No)		(if no, explain in Re		
Are Vegetation		No ,or Hydrolog	•				,	X No
Are Vegetation		No ,or Hydrolog		ally problematic?		eded, explain any a		
SUMMARY OF		Attach site m	n chowing c	ampling pair	at locations	transacts im	nortant fo	oturos oto
SOWINART OF	INDINGS -	Allacii Sile iii	ap snowing s		it iocations,	transects, iiii	portant lea	, etc.
Hydrophytic Vegetati	on Present?	Yes						
Hydric Soil Present?		Yes	NoX	Is the Samp	oled Area			
Wetland Hydrology F	resent?	Yes	NoX	within a We	tland?	Yes	_ No	X
Demontre								
Remarks:								
This point was de	termined not to	be within a wetland	due to the lack of	all three wetland co	riteria.			
				_				
The survey area	was determined	to be wetter than no	ormal at the time of	f survey.				
HYDROLOGY								
Wetland hydrole	gy Indicators:					Secondary Indicato	rs (minimum of	f two required)
Primary Indicator	s (minimum of o	ne is required; chec	k all that apply)			Surface Soil	Cracks (B6)	
Surface W	ater (A1)	_	Aquatic Fauna	a (B13)	_			ve Surface (B8)
High Wate	r Table (A2)	_	Marl Deposits	s (B15) (LRR U) Drainage Patterns (B10)				
Saturation	(A3)	_	Hydrogen Sulf	fide Odor (C1)	_	Moss Trim Li	nes (B16)	
Water Mar	ks (B1)		Oxidized Rhize	ospheres on Living	Roots(C3)	Dry-Season \	Water Table (C	22)
Sediment	Deposits (B2)		Presence of R	Reduced Iron (C4)	_	Crayfish Burr	ows (C8)	
Drift Depos	sits (B3)		Recent Iron Re	eduction in Tilled S	Soils (C6)	Saturation Vi	sible on Aerial	Imagery (C9)
Algal Mat	or Crust (B4)		Thin Muck Su	rface (C7)	_	Geomorphic	Position (D2)	
Iron Depos	its (B5)		Other (Explain	n in Remarks)	_	Shallow Aqui	tard (D3)	
Inundation	Visible on Aeria	l Imagery (B7)			_	FAC-Neutral	Test (D5)	
Water-Sta	ned Leaves (B9)			-	Sphagnum m	noss (D8) (LRF	₹ T, U)
5 , 110, 41								
Field Observations			5 " " 1					
Surface Water Prese		NoX		<i>'</i>				
Water Table Present		NoX	_ ' `	· ——			.,	
Saturation Present? (includes capillary fri	Yes nae)	NoX_	Depth (inche	es): <u>>20</u>	wetland Hydr	ology Present?	Yes	_ NoX
	<u> </u>	gauge, monitoring v	vell aerial photos	nrevious inspectio	 ns) if available:			
Describe Necord	su Data (Stream	gauge, monitoring v	veii, aeriai priotos,	previous irispectio	iis), ii avallable.			
Remarks:								
No positive indica	ation of wetland	hydrology was obse	rved.					

		Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:	30 ft)	% cover	Species?	Status	Number of Dominant Species
4. Nama Obsassial					That Are OBL, FACW, or FAC: 0 (A)
					(1)
2					Total Number of Dominant
3			· 		
4					Species Across All Strata: (B)
5					
6					Percent of Dominant Species
		0	= Total Cover		That Are OBL, FACW, or FAC: (A/B)
	50% of total cover:	0	20% of total cover:	0	
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:
1. None Observed					Total % Cover of: Multiply by:
2			<u> </u>		OBL species 0 x 1 = 0
3					FACW species 0 x 2 = 0
4.					FAC species 35 x 3 = 105
5.					FACU species 75 x 4 = 300
6.			· 		UPL species 7 x 5 = 35
•			= Total Cover		Column Totals: 117 (A) 440 (B
	50% of total cover:		20% of total cover:	0	(A)(D
Shrub Stratum (Dist size:		U	20% OF IOIAI COVER.	0	Prevalence Index = B/A = 3.76
Shrub Stratum (Plot size:	30 ft.)	_	V	un	Prevalence Index = B/A = 3.76
1. Prosopis glandulosa		5	<u>Yes</u>	UPL_	
2. Vachellia farnesiana		5	Yes	FACU	Hydrophytic Vegetation Indicators:
3					1 - Rapid Test for Hydrophytic Vegetation
4					2 - Dominance Test is >50%
5					3 - Prevalence Index is ≤ 3.0 ¹
6					Problematic Hydrophytic Vegetation ¹ (Explain)
		10	= Total Cover		
	50% of total cover:	5	20% of total cover:	2	¹ Indicators of hydric soil and wetland hydrology must
Herb Stratum (Plot size:					be present, unless disturbed or problematic.
1. Cynodon dactylon	,	70	Yes	FACU	Definitions of Five Vegetation Strata:
Ambrosia psilostachya		15	No	FAC	Tree - Woody plants, excluding woody vines,
3. Schinus terebinthifolia		20	No	FAC	approximately 20 ft (6m) or more in height and 3 in.
4. Oxalis stricta		2	No	<u>UPL</u>	(7.6 cm) or larger in diameter at breast height (DBH).
5					Sapling - Woody plants, excluding woody vines,
6					approximately 20 ft (6 m) or more in height and less
7					
8			 ,		than 3 in. (7.6 cm) DBH.
9					
10			·		Shrub - Woody plants, excluding woody vines,
11					approximately 3 to 20 ft (1 to 6 m) in height.
		107	= Total Cover		
	50% of total cover:	53.5	20% of total cover:	21.4	Herb - All herbaceous (non-woody) plants, including
Woody Vine Stratum (Plot size:	30 ft.)		•		herbaceous vines, regardless of size, and woody
1. None Observed					plants, except woody vines, less than approximately
					3 ft (1 m) in height.
2.					, ,
3					Woody vine - All woody vines, regardless of height.
4					violaty vine - 7 in woody vines, regulaless of height.
5					
			= Total Cover		Hydrophytic
	50% of total cover:	0	20% of total cover:	0	Vegetation
					Present? Yes NoX
Remarks: (if observed, list me	orphological adaptati	ons below).		
No positive indication of budge	anhutia vacatatias ···-	o obcom:-	d (>500/ of domin	t angaine in d	avad as EAC- or driar)
No positive indication of hydro	philytic vegetation wa	is observe	น (=30% บา นับเกเกลก	r sheries inde	execu as 1 AO OI UIIEI).

Depth	Matrix			Redox F	eatures					
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks		
0-16	10YR 4/2	100	None				Loamy Sand			
	Concentration, D=De					² Location: PL	_=Pore Lining, M=Matrix			
Hydric Soil	ls Indicators: (Appl	icable to a	all LRRs, unless ot	herwise n	oted.)		Indicators for Proble	matic Hydric Soils ³ :		
Histos	ol (A1)				Surface (S8) (L		1 cm Muck (A9) (LRR O)		
Histic I	Epipedon (A2)		Thin D	ark Surface	e (S9) (LRR S ,	T, U)	2 cm Muck (A10)	(LRR S)		
Black I	Histic (A3)		Loamy	Mucky Mir	neral (F1) (LRR	O)	Reduced Vertic (F18) (outside MLRA 150A,B)			
Hydrog	gen Sulfide (A4)		Loamy	Gleyed Ma	atrix (F2)			lain Soils (F19) (LRR P, S, T)		
Stratifi	ed Layers (A5)		Deplete	ed Matrix (I	F3)		Anomalous Bright Loamy Soils (F20)			
Organi	ic Bodies (A6) (LRR	P, T, U)	Redox	Dark Surfa	ace (F6)		(MLRA 153B)			
5 cm N	Mucky Mineral (A7) (I	RR P, T, U	J) Deplete	ed Dark Su	ırface (F7)		Red Parent Material (TF2)			
Muck F	Presence (A8) (LRR	U)	Redox	Depression	ns (F8)		Very Shallow Dar	k Surface (TF12)		
1 cm N	Muck (A9) (LRR P, T))	Marl (F	10) (LRR I	U)		Other (Explain in Remarks)			
Deplet	ed Below Dark Surfa	ice (A11)	Deplete	ed Ochric (F11) (MLRA 1	51)				
Thick I	Dark Surface (A12)		Iron-Ma	anganese I	Masses (F12) (LRR O, P, T)				
Coast	Prairie Redox (A16)	(MLRA 15	DA) Umbrid	Surface (F	F13) (LRR P, T	, U)	wetland hydrology must be present, unless disturbed or problematic.			
Sandy	Mucky Mineral (S1)	(LRR O, S) Delta C	Ochric (F17	") (MLRA 151)		unless disturbed of problematic.			
Sandy	Gleyed Matrix (S4)		Reduce	uced Vertic (F18) (MLRA 150A, 150B)						
Sandy	Redox (S5)		Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A)				
Strippe	ed Matrix (S6)		Anoma	lous Bright	t Loamy Soils (F	²⁰ (MLRA 149	A, 153C, 153D)			
Dark S	Surface (S7) (LRR P,	S, T, U)								
Postrictivo	Layer (if observed)	•				<u> </u>				
	Layer (II Observed)									
Type:						l localist a	Call Duna ant 2 Van	Na V		
Depth (inches):						Hydric	Soil Present? Yes _	NoX		
Remarks:						!				

Project/Site:		Bluewater SPM		Co	unty:	San Patricio	S	ampling Dat	e la	anuary 29, 2019
Applicant/Owner:		Lloyd I			Stat					DPA006_PEM
Investigator(s):		her and			ction, Township	·		-	N/A	
Landform (hillslope, te			, Saltwater		cal relief (conca		ne): N	one S		0-5
Subregion (LRR or MI			-		,				,	North American Datum 1983
Soil Map Unit Name:	, <u> </u>			anola soils				ification:		PEM1A
Are climatic / hydrolog	ic conditions of	n the site typical	for this time	e of year? (Y	es / No)	No	if no, expla	ain in Remar	ks.)	
Are Vegetation	No ,Soil	No ,or Hyd	rology	No significar	ntly disturbed?	Are "Normal C	ircumstance	s" present?	Yes	X No
Are Vegetation	No ,Soil	No ,or Hyd	rology	No naturally	problematic?	(If n	eeded, expla	ain any answ	ers in Ren	narks.)
SUMMARY OF	FINDINGS	- Attach site	e map sl	nowing san	nolina poin	t locations	. transec	ts. impoi	rtant fea	atures, etc.
							,			
		.,								
Hydrophytic Vegetati		Yes X	No		I- 41 0					
Hydric Soil Present?		Yes X		·	Is the Sample		V	v	N.	
Wetland Hydrology F	resent?	Yes X	NC		within a Wet	iano?	res_	X	NO	
Remarks:										
	starminad ta b	o within a watlan	d due to the	nracense of all	2 wetland crites	i.				
This point was de	etermined to be	a within a wettane	a due to the	presence or all	3 welland chief	ia.				
The survey area	was determine	ed to be wetter th	an normal a	at the time of su	rvev					
The survey area	was determine	d to be wetter th	annonnara	at the time of su	ivey.					
HYDROLOGY	lll4									
Wetland hydrol	•									f two required)
Primary Indicator	`	one is required;		,				ace Soil Crad	` '	
Surface W	` ,			quatic Fauna (B	•					ve Surface (B8)
	r Table (A2)				Drainage Patterns (B10)					
X Saturation				ydrogen Sulfide				Trim Lines		
Water Mar				xidized Rhizospl	_	Roots(C3)		Season Wate	•	2)
_	Deposits (B2)			esence of Redu	` ,			fish Burrows	, ,	
Drift Depo				ecent Iron Redu		oils (C6)				Imagery (C9)
	or Crust (B4)			nin Muck Surfac				morphic Posi		
Iron Depos			0	ther (Explain in l	Remarks)			ow Aquitard		
		rial Imagery (B7)						-Neutral Tes		
Water-Sta	ined Leaves (E	39)					Spha	agnum moss	(D8) (LRF	₹ T, U)
Field Observations	<u> </u>									
Surface Water Prese		No	X	Depth (inches):	N/A					
Water Table Present		No		Depth (inches):						
Saturation Present?	_	No		Depth (inches):		Wetland Hyd	Irology Pres	sent? Ye	s X	No
(includes capillary fri				1 (/	<u> </u>	, , ,	3,			
Describe Record	ed Data (strea	m gauge, monito	ring well, a	erial photos, pre	vious inspectior	ns), if available:				
Remarks:										
A state to at	· •	Leader Leaven								
A positive indicat	ion of wetland	nydrology was o	bserved (at	least one prima	iry indicator).					
A positive indicat	ion of wetland	hydrology was o	hserved (at	least two secon	ndary indicators					
7 (poolaro inaioa)	ion or woulding	nyarology was s	500, voa (a.	10001 1110 00001	idary irialoatoro,	,-				

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft \	% cover	Species?	Status	Number of Dominant Species	
1 Nama Observad		70 00 001	Орсоюз:	Otatas	That Are OBL, FACW, or FAC: 1 (A)	
			·		That Are OBE, I AOW, OI I AO.	
2.					Total New Long & Demoissant	
3.					Total Number of Dominant	
4			· 		Species Across All Strata: 1 (B)	
5						
6					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC: (A/B))
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1. None Observed			·		Total % Cover of: Multiply by:	
2			<u> </u>		OBL species110 x 1 =110	
3					FACW species 20 x 2 = 40	
4.					FAC species 0 x 3 = 0	
5.					FACU species 0 x 4 = 0	
6.			. <u></u> -		UPL species 0 x 5 = 0	
			= Total Cover			(B)
	50% of total cover:		20% of total cover:	n	100	(-)
Shrub Stratum (Diat aiza:			20 % of total cover.		Prevalence Index = B/A = 1.15	
Shrub Stratum (Plot size:					Frevalence index - B/A - 1.15	
					The described by Manadada and Adams	-
2					Hydrophytic Vegetation Indicators:	
3					1 - Rapid Test for Hydrophytic Vegetation	
4					X 2 - Dominance Test is >50%	
5					X 3 - Prevalence Index is ≤ 3.0 ¹	
6					Problematic Hydrophytic Vegetation ¹ (Explain)	
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
Distichlis littoralis		80	Yes	OBL	Definitions of Five Vegetation Strata:	
2. Borrichia frutescens		 25	No	OBL	Tree - Woody plants, excluding woody vines,	
3. Lycium carolinianum		15	No	FACW	approximately 20 ft (6m) or more in height and 3 in.	
4. Andropogon glomeratus		5	No	FACW	(7.6 cm) or larger in diameter at breast height (DBH).	
Salicornia depressa		<u>5</u>	No	OBL	(7.0 only of larger in diameter at breast height (BBH).	
				ODL	Sapling - Woody plants, excluding woody vines,	
6					approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8.			·		than 6 m. (7.6 6m) BBM.	
9					Shrub - Woody plants, excluding woody vines,	
10						
11					approximately 3 to 20 ft (1 to 6 m) in height.	
		130	= Total Cover			
	50% of total cover:	65	20% of total cover:	26	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:	30 ft)				herbaceous vines, regardless of size, <u>and</u> woody	
1. None Observed					plants, except woody vines, less than approximately	
2					3 ft (1 m) in height.	
3						
4.					Woody vine - All woody vines, regardless of height.	
5.						
			= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes X No	
					100 <u>X</u> 110	
Pamarke: (if abase and list	orphological adapt-ti	one helevi	\			\dashv
Remarks: (if observed, list me	วเคเบเบฐเฉลเ สนสคุโสโโ	ous neiow).			
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	species index	ked as OBL, FACW, or FAC).	

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Depth	Matrix			Redox F	eatures						
inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks			
0-2	5YR 4/1	100	None				Sandy Clay				
2-16	10YR 6/2	95	10YR 5/8	5	C	M	Sandy Clay				
		<u></u>		<u></u>							
	Concentration, D=De		·			Location: Pl	_=Pore Lining, M=Matrix				
•	s Indicators: (Appl	icable to a	•		•	DD 0 T !!	Indicators for Proble				
Histosol (A1) —— Polyvalue Below Surface (S8) (LRR S, 1)						1 cm Muck (A9) (·				
Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U)						•	2 cm Muck (A10)	` '			
Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O)						0)	Reduced Vertic (F18) (outside MLRA 150A,B Piedmont Floodplain Soils (F19) (LRR P, S, T)				
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)								, ,, , , ,			
Stratified Layers (A5) Depleted Matrix (F3)								t Loamy Soils (F20)			
Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6)							(MLRA 153B)				
	fucky Mineral (A7) (L		· — ·		ırface (F7)		Red Parent Material (TF2) Very Shallow Dark Surface (TF12)				
	Presence (A8) (LRR	-		Depressio				, ,			
	fluck (A9) (LRR P, T)			10) (LRR I			Other (Explain in Remarks)				
	ed Below Dark Surfa	ice (A11)	·	`	F11) (MLRA 1	•	31				
	Dark Surface (A12)			•	Masses (F12) (O, P, T) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
	Prairie Redox (A16)	•	· —		=13) (LRR P, T	, U)					
	Mucky Mineral (S1)	(LRR O, S		•	() (MLRA 151)						
	Gleyed Matrix (S4)			,	18) (MLRA 15						
	Redox (S5)				ain Soils (F19)	•					
	ed Matrix (S6)		Anoma	ous Bright	t Loamy Soils (f	²⁰ (MLRA 149	A, 153C, 153D)				
Dark S	urface (S7) (LRR P,	S, T, U)									
Restrictive	Layer (if observed)):									
Type:											
Depth (inches):					Hydric	Soil Present? Yes	X No				
	, <u> </u>										
Remarks:											

Project/Site:	F	Bluewater SPM	Co	ounty:	San Patricio	Sampling	Date: Ja	nuary 29, 2019
Applicant/Owner:		Lloyd Engine		Stat			Point:	
Investigator(s):		r and		ection, Township		·	N/A	
Landform (hillslope, ter			water L	ocal relief (conca	ave, convex, non	ne): None	Slope (%):	0-5
Subregion (LRR or ML	RA):	Т		Lat: 27.9	01085 Lor	ng: -97.13965	9 Datum:	North American Datum 19
Soil Map Unit Name:			Dianola soils			NWI Classification:		N/A
Are climatic / hydrologi	c conditions on t	the site typical for thi	s time of year? (Yes / No)	No	(if no, explain in Re	marks.)	
Are Vegetation	No,Soil	No ,or Hydrology	No significa	intly disturbed?	Are "Normal Cir	rcumstances" prese	nt? Yes	X No
Are Vegetation	No ,Soil	,or Hydrology	No naturally	y problematic?	(If ne	eded, explain any a	nswers in Ren	narks.)
SUMMARY OF F	INDINGS -	Attach site ma	p showing sai	mpling poin	t locations,	transects, im	portant fea	atures, etc.
				T				
Hydrophytic Vegetation	n Procent?	Vos	No X					
Hydric Soil Present?	iii Fieseiit!	Yes Yes		Is the Samp	lad Araa			
Wetland Hydrology P	resent?	Yes	No X	within a We		Yes	No	Y
Wedana Hydrology i	COCIN:	103	<u> </u>	Within a vic	liuna i	103		
Remarks:								
This point was de	termined not to	be within a wetland o	lue to the lack of all	three wetland cr	iteria			
This point was de	errillied flot to i	se within a wettand t	de to the lack of all	tillee wetland ci	iteria.			
The survey area v	vas determined	to be wetter than no	rmal at the time of si	urvey.				
,				· - , ·				
11)/77701 00)/								
HYDROLOGY Wetland hydrolo	av Indicators:							
			. II 41 4		-	Secondary Indicato		two required)
	•	ne is required; check		242)		Surface Soil	` ,	Cf (D0)
Surface Wa	, ,		_ Aquatic Fauna (E	·	-			e Surface (B8)
High Water		_	_ Marl Deposits (B		-	Drainage Pat		
Saturation		_	_ Hydrogen Sulfide		-	Moss Trim Li		20)
Water Mark	` ,	_	_ Oxidized Rhizosp	_	Roots(C3)		Nater Table (C	72)
	eposits (B2)		_ Presence of Red	` ,	-	Crayfish Burr		. (22)
Drift Depos			_ Recent Iron Red		oils (C6)		sible on Aerial	Imagery (C9)
	r Crust (B4)		_ Thin Muck Surfa	, ,	-	Geomorphic	, ,	
Iron Depos			Other (Explain in	Remarks)	-	Shallow Aqui		
	Visible on Aerial				-	FAC-Neutral	, ,	
Water-Stair	ned Leaves (B9)	l			-	Sphagnum m	ioss (D8) (LRF	ł T, U)
Field Observations:								
Surface Water Prese	nt? Yes	No X	Depth (inches)	: N/A				
Water Table Present		No X						
Saturation Present?	Yes	No X	Depth (inches)		Wetland Hydr	ology Present?	Yes	No X
(includes capillary frin			_ ' ` '		, ,	3,		
Describe Recorde	d Data (stream	gauge, monitoring w	ell, aerial photos, pr	evious inspection	ns), if available:			
Remarks:								
NI ini i di	£							
No positive indica	lion of wetland r	nydrology was observ	vea.					

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft)	% cover	Species?	Status	Number of Dominant Species	
1 Name Observed		70 00 701	_ороскос.	Otatao	That Are OBL, FACW, or FAC: 2 (A	()
					That rice obe, triow, of the	')
2					Total Number of Dominant	
3.			·			٥١
4					Species Across All Strata: 4 (B	9)
5			·			
6			· _ ·		Percent of Dominant Species	
			= Total Cover		That Are OBL, FACW, or FAC: (A	VB)
	50% of total cover:	0	20% of total cover:	0	Prevalence Index Worksheet:	
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index worksneet:	
1. None Observed					Total % Cover of: Multiply by:	_
2			. <u>——</u>		OBL species15 x 1 =15	_
3			. <u> </u>		FACW species 0 x 2 = 0	_
4					FAC species x 3 = 60	_
5					FACU species 30 x 4 = 120	_
6					UPL species 25 x 5 = 125	
		0	= Total Cover		Column Totals: 90 (A) 320	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:					Prevalence Index = B/A = 3.56	
1. Schinus terebinthifolia	,	15	Yes	FAC		_
2.					Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
					2 - Dominance Test is >50%	
4					3 - Prevalence Index is ≤ 3.0 ¹	
5			<u> </u>		Problematic Hydrophytic Vegetation ¹ (Explain)	
6		45	T + 1 0		Problematic Hydrophytic Vegetation (Explain)	
			= Total Cover		1	
		7.5	20% of total cover:	3	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
Cynodon dactylon		30	Yes	FACU	Definitions of Five Vegetation Strata:	
2. Borrichia frutescens		15	Yes	OBL	Tree - Woody plants, excluding woody vines,	
3. Opuntia engelmannii		15	Yes	<u>UPL</u>	approximately 20 ft (6m) or more in height and 3 in.	
4. Ratibida columnifera		10	No	UPL	(7.6 cm) or larger in diameter at breast height (DBH).	
5. Ambrosia psilostachya		5	No	FAC		
6					Sapling - Woody plants, excluding woody vines,	
7			·		approximately 20 ft (6 m) or more in height and less	
8					than 3 in. (7.6 cm) DBH.	
9			. <u> </u>			
10.					Shrub - Woody plants, excluding woody vines,	
11.					approximately 3 to 20 ft (1 to 6 m) in height.	
		 75	= Total Cover			
	50% of total cover:		20% of total cover:	15	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:					herbaceous vines, regardless of size, and woody	
1. None Observed	,				plants, except woody vines, less than approximately	
2.			·		3 ft (1 m) in height.	
3.					, , ,	
	·				Woody vine - All woody vines, regardless of height.	
4			·			
5			- Tatal Causa		Hudron budio	
	500/ · £4.4.1 · · · · ·		= Total Cover	0	Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes NoX	
Remarks: (if observed, list mo	orphological adaptati	ons below).			
No positive indication of hydro	phytic vegetation wa	as observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).	
,	. , 5		,		- ,	

Depth	Matrix			Redox F				
inches)_	Color (moist)		Color (moist)	%_	Type ¹	Loc ²	Texture	Remarks
0-16	10YR 4/2	100	None				Loamy Sand	
Type: C=C	oncentration, D=Dep	letion, RM=F	Reduced Matrix, N	/IS=Maske	d Sand Grains.	² Location: P	L=Pore Lining, M=Matr	ix.
lydric Soils	Indicators: (Appli	icable to all	LRRs, unless of	herwise n	oted.)		Indicators for Prob	lematic Hydric Soils ³ :
Histoso	I (A1)		Polyva	lue Below	Surface (S8) (Ll	RR S, T, U)	1 cm Muck (A9)	· ·
Histic E	pipedon (A2)		Thin D	ark Surfac	e (S9) (LRR S, 1	Γ, U)	2 cm Muck (A1	0) (LRR S)
Black H	listic (A3)		Loamy	Mucky Mir	neral (F1) (LRR	O)	Reduced Vertic	(F18) (outside MLRA 150A,
Hydrog	en Sulfide (A4)		Loamy	Gleyed Ma	atrix (F2)		Piedmont Flood	lplain Soils (F19) (LRR P, S,
Stratifie	d Layers (A5)		Deplet	ed Matrix (F3)		Anomalous Brig	ht Loamy Soils (F20)
Organio	Bodies (A6) (LRR I	P, T, U)	—— Redox	Dark Surfa	ace (F6)		(MLRA 153B)	
5 cm M	ucky Mineral (A7) (L	.RR P, T, U)	 Deplet	ed Dark Su	ırface (F7)		Red Parent Ma	terial (TF2)
Muck P	resence (A8) (LRR	U)	—— Redox	Depressio	ns (F8)		Very Shallow D	ark Surface (TF12)
1 cm M	uck (A9) (LRR P, T)		Marl (F	10) (LRR	U)		Other (Explain i	n Remarks)
Deplete	d Below Dark Surface	ce (A11)	 Deplet	ed Ochric (F11) (MLRA 15	1)		
Thick D	ark Surface (A12)		Iron-M	anganese l	Masses (F12) (I	LRR O, P, T)	³ Indicators of	hydrophytic vegetation and
— Coast F	Prairie Redox (A16) (MLRA 150A	.) Umbrid	Surface (I	=13) (LRR P, T,	U)		ology must be present,
	Mucky Mineral (S1) () (MLRA 151)		unless distur	bed or problematic.
Sandy (Gleyed Matrix (S4)		—— Reduc	ed Vertic (I	18) (MLRA 150	A, 150B)		
	Redox (S5)		Piedme	ont Floodpl	ain Soils (F19) (MLRA 149A)		
	d Matrix (S6)		Anoma	lous Brigh	Loamy Soils (F	20) (MLRA 14	9A, 153C, 153D)	
Dark Su	urface (S7) (LRR P,	S, T, U)						
Restrictive I	Layer (if observed):	:						
Type:								
Depth (in	ches):					Hydri	c Soil Present? Yes	NoX
Remarks:								
No positive i	ndication of hydric so	oils was obse	erved.					

Project/Site:	ı	Bluewater SPM		County:	Nueces	S	ampling Date:	January 29, 2019
Applicant/Owner:		Lloyd Engine	erina	Stat			Sample Point:	
Investigator(s):	E. Munsche		J. Mitchell	Section, Township			 N//	
Landform (hillslope, terr				Local relief (conc	· · ·	one): N	one Slo	
Subregion (LRR or MLF					95962 Lo	' 		Datum: North American Datum 1983
Soil Map Unit Name:			Water			_	ification:	
Are climatic / hydrologic	conditions on	the site typical for this	time of year?	(Yes / No)	No	_ _(if no, expla	in in Remarks	.)
Are Vegetation	No,Soil	No ,or Hydrology	No signif	ficantly disturbed?	Are "Normal C	Circumstance	s" present? `	YesX No
Are Vegetation	No,Soil	No ,or Hydrology	No natur	ally problematic?	(If n	needed, expla	in any answer	rs in Remarks.)
SUMMARY OF F	NDINGS -	Attach site ma	p showing s	sampling poin	t locations	s, transec	ts, importa	ant features, etc.
Harden alexandra Maria de Africa	D10	V	M.					
Hydrophytic Vegetation	1 Present?	Yes X	No		lad Amaa			
Hydric Soil Present?	ocont?	Yes X Yes X	No	Is the Samp		Voc	v	No
Wetland Hydrology Pro	3501111	1es	No	within a We	uanu r	162	<u> </u>	No
Remarks:								
This point was dete	ermined to be	within a wetland due t	o the presence o	of all 3 wetland crite	ria.			
Time point trae det			о што р госоттоо с					
The survey area w	as determined	to be wetter than nor	mal at the time o	f survev.				
The curvey area w	ao aotominoa	to be weller than her	marat are ario	a our voy.				
HYDROLOGY								
Wetland hydrolog	y Indicators:					Secondary	Indicators (min	nimum of two required)
Primary Indicators	(minimum of o	ne is required; check	all that apply)				ace Soil Cracks	` '
Surface Wa			_ Aquatic Fauna	, ,				d Concave Surface (B8)
High Water			_	(B15) (LRR U)			nage Patterns (
Saturation (,	<u>X</u>	_ Hydrogen Sul	, ,			s Trim Lines (B	·
Water Mark	s (B1)		Oxidized Rhiz	ospheres on Living	Roots(C3)	Dry-S	Season Water	Table (C2)
Sediment De	eposits (B2)		Presence of F	Reduced Iron (C4)		Cray	fish Burrows (C	28)
Drift Deposit	.s (B3)		Recent Iron R	eduction in Tilled S	oils (C6)	Satu	ration Visible o	on Aerial Imagery (C9)
Algal Mat or	Crust (B4)		_ Thin Muck Su	rface (C7)		Geor	morphic Positio	on (D2)
Iron Deposit	s (B5)	_X	Other (Explain	n in Remarks)		Shall	ow Aquitard (D	03)
Inundation V	'isible on Aeria	l Imagery (B7)				X FAC-	-Neutral Test (I	D5)
Water-Stain	ed Leaves (B9)				Spha	gnum moss (D	08) (LRR T, U)
Field Observations:								
Surface Water Presen	t? Yes	NoX	_ Depth (inch	es): N/A				
Water Table Present?			_ Depth (inch	es): >20				
Saturation Present?	Yes	NoX	_ Depth (inch	es): >20	Wetland Hyd	drology Pres	ent? Yes_	X No
(includes capillary fring	je)							
Describe Recorded	d Data (stream	gauge, monitoring w	ell, aerial photos,	previous inspection	ns), if available:	:		
Remarks:								
A positive indication	n of wetland h	ydrology was observe	d (at least one p	rimary indicator).				
Other: Coastal inu	ndation.							

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft.)	% cover	Species?	Status	Number of Dominant Species	
4. None Observed					That Are OBL, FACW, or FAC: (A)
2.						
3					Total Number of Dominant	
4					Species Across All Strata: 2 (i	B)
5						
6					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC: 100% (A	A/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1. None Observed			<u> </u>		Total % Cover of: Multiply by:	
2	_		. <u> </u>		OBL species 80 x 1 = 80	_
3			<u> </u>		FACW species 0 x 2 = 0	
4			. <u>———</u>		FAC species 0 x 3 = 0	_
5			. <u>———</u>		FACU species 0 x 4 = 0	_
6			<u> </u>		UPL species 0 x 5 = 0	_
		0	= Total Cover		Column Totals: 80 (A) 80	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = 1.00	_
1. Avicennia germinans		50	Yes	OBL		
2	_		<u> </u>		Hydrophytic Vegetation Indicators:	
3			<u> </u>		1 - Rapid Test for Hydrophytic Vegetation	
4			<u> </u>		X 2 - Dominance Test is >50%	
5	_		. <u>———</u>		X 3 - Prevalence Index is ≤ 3.0 ¹	
6			<u> </u>		Problematic Hydrophytic Vegetation ¹ (Explain)	
		50	= Total Cover			
	50% of total cover:	25	20% of total cover:	10	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
Spartina alterniflora		30	Yes	OBL	Definitions of Five Vegetation Strata:	
2					Tree - Woody plants, excluding woody vines,	
3			<u> </u>		approximately 20 ft (6m) or more in height and 3 in.	
4			<u> </u>		(7.6 cm) or larger in diameter at breast height (DBH).	
5			<u> </u>			
6			. <u> </u>		Sapling - Woody plants, excluding woody vines,	
7	_		. <u>———</u>		approximately 20 ft (6 m) or more in height and less	
8			. <u>———</u>		than 3 in. (7.6 cm) DBH.	
9	_		. <u> </u>			
10			. <u> </u>		Shrub - Woody plants, excluding woody vines,	
11			<u> </u>		approximately 3 to 20 ft (1 to 6 m) in height.	
		30	= Total Cover			
	50% of total cover:	15	20% of total cover:	6	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:	30 ft)				herbaceous vines, regardless of size, and woody	
1. None Observed			<u> </u>		plants, except woody vines, less than approximately	
2			<u> </u>		3 ft (1 m) in height.	
3			<u> </u>			
4	_		<u> </u>		Woody vine - All woody vines, regardless of height.	
5			<u> </u>			
		0	= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes X No	
Remarks: (if observed, list me	orphological adaptati	ons below).			
A positive indication of hydrop	hytic vegetation was	heerved	(>50% of dominant	snecies inde	yed as OBL_FACW_or FAC)	
. _F 2a.ca.com on mydrop	,		,	,	, ,	

A positive indication of hydrophytic vegetation was observed (Prevalence Index is \leq 3.00).

Depth	Matrix			Redox	Features			
inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-16	N 4	100	None				Sandy Clay	Shell hash mixed with
								matrix
Type: C=C	oncentration, D=Dep	oletion, RM=	Reduced Matrix, M	 IS=Maske	ed Sand Grains	² Location: P	L=Pore Lining, M=N	Matrix.
	s Indicators: (Appl							roblematic Hydric Soils ³ :
Histoso					Surface (S8) (LRR S, T, U)		(A9) (LRR O)
	Epipedon (A2)				ce (S9) (LRR S			(A10) (LRR S)
	Histic (A3)				ineral (F1) (LRI	· ·		ertic (F18) (outside MLRA 150A,
	en Sulfide (A4)			-	latrix (F2)	-,		loodplain Soils (F19) (LRR P, S, 1
	ed Layers (A5)			ed Matrix				Bright Loamy Soils (F20)
	c Bodies (A6) (LRR	P. T. U)		Dark Surf			(MLRA 153	- , ,
	lucky Mineral (A7) (L				urface (F7)		-	Material (TF2)
	Presence (A8) (LRR			Depression				w Dark Surface (TF12)
		10) (LRR				ain in Remarks)		
	luck (A9) (LRR P, T) ed Below Dark Surfa				. 6) (F11) (MLRA 1	51)	Опог (Ехрі	a ar romanoj
	Dark Surface (A12)	00 (7111)			Masses (F12)	=	³ Indicator	s of hydrophytic vegetation and
	Prairie Redox (A16)	(MI RA 150		-	(F13) (LRR P,			ydrology must be present,
	Mucky Mineral (S1)	•	· —		7) (MLRA 151)	· •		sturbed or problematic.
	Gleyed Matrix (S4)	(LIXIX 0, 0)			(F18) (MLRA 1			
	Redox (S5)					(MLRA 149A)		
				-	,	-	A 4500 450D)	
	d Matrix (S6) urface (S7) (LRR P,	a =	Anoma	ious brigi	it Loanly Soils	F20) (MLRA 149	JA, 153C, 153D)	
Type: Depth (in						Hydric	Soil Present? Y	es <u>X</u> No
Remarks:	dication of hydric so	il was obser	ved.			'		

Project/Site:		Bluewater SPM		County:	Nueces	Sampling	Date: I:	anuary 29, 2019
Applicant/Owner:		Lloyd Engi	neering	Sta				DPA009_PSS
Investigator(s):	E. Munsc	ther and	J. Mitchell	Section, Townshi	-	<u> </u>	N/A	
Landform (hillslope, te			Itwater	Local relief (conc	· · · —	ne): None	Slope (%):	0-5
Subregion (LRR or MI							0 Datum	North American Datum 1983
Soil Map Unit Name:		ljan		flooded		NWI Classification:		E2USN
Are climatic / hydrolog	ic conditions of	on the site typical for t	his time of year?	(Yes / No)	No	_(if no, explain in Rer	marks.)	
Are Vegetation	No ,Soil	No ,or Hydrolog	gy <u>No</u> signi	ficantly disturbed?	Are "Normal C	Circumstances" prese	nt? Yes	X No
Are Vegetation	No,Soil_	No ,or Hydrolog	gy <u>No</u> natur	rally problematic?	(If ne	eeded, explain any a	nswers in Rer	narks.)
SUMMARY OF	FINDINGS	- Attach site m	ap showing s	sampling poir	t locations	, transects, im	portant fe	atures, etc.
Hydrophytic Vegetati	on Present?	Yes X	No					
Hydric Soil Present?		Yes X	No No		oled Δrea			
Wetland Hydrology F		Yes X	No	within a We		Yes X	No	
l		. 55				<u></u>		
Remarks:								
This point was de	etermined to b	oe within a wetland due	e to the presence o	of all 3 wetland crite	eria			
Tillo politi was as	MOTTHING TO D	o wanii a wolana aa	o to the processes t	or an o wonarra orice	na.			
The survey area	was determin	ed to be wetter than n	ormal at the time o	of survey.				
HYDROLOGY								
Wetland hydrole	ogy Indicator	 'S:				Sacandary Indicator	ro (minimum c	f two required)
1	•	f one is required; chec	rk all that annly)			Secondary Indicator Surface Soil (i two required)
X Surface W	•	•	X Aquatic Fauna	a (B13)		X Sparsely Veg	` ,	ve Surface (B8)
	r Table (A2)			(B15) (LRR U)		Drainage Patt		vo Guriado (Bo)
Saturation		_	X Hydrogen Sul	, , ,		Moss Trim Lir		
Water Mar		_		cospheres on Living	Roots(C3)	Dry-Season V	, ,	22)
	Deposits (B2)	_		Reduced Iron (C4)	110013(00)	Crayfish Burro	•	32)
		_		` '	toile (C6)		, ,	Imagany (CO)
Drift Depos		_		leduction in Tilled S	olis (Co)			Imagery (C9)
	or Crust (B4)	_	Thin Muck Su	, ,		Geomorphic F	, ,	
Iron Depos			Other (Explain	n in Remarks)		Shallow Aquit	, ,	
		erial Imagery (B7)				X FAC-Neutral	, ,	
Water-Sta	ined Leaves (F	39)				Sphagnum m	oss (D8) (LRI	R T, U)
Field Observations								
Surface Water Prese		X No	Depth (inch	es): 3				
Water Table Present		No X		· ——				
Saturation Present?	Yes			es): >20	Wetland Hvd	Irology Present?	Yes X	No
(includes capillary fri	_							
Describe Record	ed Data (strea	am gauge, monitoring	well, aerial photos,	previous inspectio	ns), if available:			
Remarks:								
A positive indicat	ion of wotlond	l bydrology was obser	yed (at least one n	rimary indicator)				
A positive indicat	on or welland	d hydrology was obser	ved (at least one p	rimary indicator).				
A positive indicat	ion of wetland	d hydrology was obser	ved (at least two se	econdary indicators	:)			
7 (poolaro inaioar	on or woulding	mydrology wad obdor	vod (dr. iodor tivo o	ocorradity indicators	<i>)</i> -			

		Absolute	Dominant	Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size:	30 ft.)	% cover	Species?	Status	Number of Dominant Species		
1 Name Observed					That Are OBL, FACW, or FAC:	2	(A)
2.					, , , ,		. 、 /
3.					Total Number of Dominant		
4.					Species Across All Strata:	2	(B)
5.					'		. (/
6.					Percent of Dominant Species		
-		0	= Total Cover		That Are OBL, FACW, or FAC:	100%	(A/B)
	50% of total cover:		20% of total cover:	0	, ,		. ` ′
Sapling Stratum (Plot size:	30 ft.)		•		Prevalence Index Worksheet:		
1. None Observed					Total % Cover of:	Multiply by	:
2.					OBL species 55	x 1 = 55	
3.			· <u></u>		FACW species 0	x 2 = 0	
4.			· <u></u>		FAC species 0	x 3 = 0	
5.			·		FACU species 0	x 4 = 0	
6.			·		UPL species 0	x 5 = 0	
		0	= Total Cover		Column Totals: 55	(A) 55	(B)
	50% of total cover:	0	20% of total cover:	0			
Shrub Stratum (Plot size:	30 ft.)		•		Prevalence Index = B/A	= 1.00	
1. Avicennia germinans		50	Yes	OBL			
2.					Hydrophytic Vegetation Indicat	ors:	
3.					1 - Rapid Test for Hydro	phytic Vegetation	
4.					X 2 - Dominance Test is >	50%	
5.					X 3 - Prevalence Index is s	£ 3.0 ¹	
6.					Problematic Hydrophytic	Vegetation ¹ (Explain	1)
_		50	= Total Cover				
	50% of total cover:	25	20% of total cover:	10	¹ Indicators of hydric soil and we	land hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or pr	roblematic.	
Salicornia depressa		5	Yes	OBL	Definitions of Five Vegetation S	3trata:	
2			. <u>———</u>		Tree - Woody plants, excluding v	woody vines,	
3			. <u> </u>		approximately 20 ft (6m) or more	in height and 3 in.	
4					(7.6 cm) or larger in diameter at b	reast height (DBH).	
5							
6					Sapling - Woody plants, excluding		
7					approximately 20 ft (6 m) or more	in height and less	
8					than 3 in. (7.6 cm) DBH.		
9			<u> </u>				
10					Shrub - Woody plants, excluding	• •	
11					approximately 3 to 20 ft (1 to 6 m) in height.	
		5	= Total Cover				
		2.5	20% of total cover:	1	Herb - All herbaceous (non-wood		
Woody Vine Stratum (Plot size					herbaceous vines, regardless of s	· 	
1. None Observed					plants, except woody vines, less	nan approximately	
2					3 ft (1 m) in height.		
3					Managharata Allaman da sana		
4					Woody vine - All woody vines, re	gardiess of neight.	
5							
			= Total Cover		Hydrophytic		
	50% of total cover:	0	20% of total cover:	0	Vegetation		
					Present? Yes X	_ No	
			`				
Remarks: (if observed, list n	norphological adaptati	ons below).				
A positive indication of hydro	phytic vegetation was	observed	(>50% of dominant	species inde	xed as OBL, FACW, or FAC).		
A positive indication of hydro	phytic vegetation was	observed	(Prevalence Index is	s ≤ 3.00).			

Depth	Matrix			Redox F	eatures				
inches)	Color (moist)	_%_	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks	
0-3	N 2.5	100	None						
3-16	10Y 5/1_	100	None			- Organic Soil Layer - Clay			
	Concentration, D=De					² Location: P	L=Pore Lining, M=Matrix.	_	
•	ls Indicators: (Appl	icable to a	•		•		Indicators for Proble		
Histoso	` ,				Surface (S8) (L	· · · · · · · · ·	1 cm Muck (A9) (•	
	Epipedon (A2)				e (S9) (LRR S,		2 cm Muck (A10)	•	
	Histic (A3)			•	neral (F1) (LRR	(O)	Reduced Vertic (F18) (outside MLRA 150A,B)		
Hydrogen Sulfide (A4) X _ Loamy Gleyed Matrix (F2)							lain Soils (F19) (LRR P, S, T)		
Stratified Layers (A5) Depleted Matrix (F3)							t Loamy Soils (F20)		
	ic Bodies (A6) (LRR			Dark Surfa	` '		(MLRA 153B)		
	Mucky Mineral (A7) (I		· — ·	ed Dark Su	. ,		Red Parent Material (TF2)		
	Presence (A8) (LRR	-		Depression			Very Shallow Dark Surface (TF12)		
1 cm N	/luck (A9) (LRR P, T)	Marl (F	10) (LRR I	U)		Other (Explain in Remarks)		
•	ed Below Dark Surfa	ice (A11)	 ·	`	F11) (MLRA 1	•	2		
	Dark Surface (A12)			anganese I	Masses (F12)	LRR O, P, T)	Jandicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
	Prairie Redox (A16)	•	· —	,	=13) (LRR P, T	, U)			
Sandy	Mucky Mineral (S1)	(LRR O, S		`) (MLRA 151)			F	
	Gleyed Matrix (S4)		Reduce	ed Vertic (F	F18) (MLRA 15	0A, 150B)			
Sandy	Redox (S5)			•	ain Soils (F19)				
	ed Matrix (S6)		Anoma	lous Bright	Loamy Soils (F20) (MLRA 14 9	9A, 153C, 153D)		
Dark S	Surface (S7) (LRR P,	S, T, U)							
Restrictive	Layer (if observed)):							
Type:									
Depth (ir	nches):					Hydrid	Soil Present? Yes	No	
Remarks:									

Project/Site:	ļ	Bluewater SPM		County:	Nueces	S	Sampling [Date:	January 29, 2019
Applicant/Owner:		Lloyd Engine	ering	, <u> </u>	State:	Texas		oint:	•
Investigator(s):	E. Munsche	er and	J. Mitchell	Section, Tow	nship, Range:		'	N/A	
Landform (hillslope, terra					concave, convex	(, none):	None		: 0-5
Subregion (LRR or MLR.		None							North American Datum 1983
Soil Map Unit Name:	,		lay loam, rarely f				Classification:		N/A
Are climatic / hydrologic	conditions on				No		explain in Ren		
		No ,or Hydrology					•	,	X No
		No ,or Hydrology		rally problemati			explain any ar	_	
CUMMARY OF FU						•	•		•
SUMMARY OF FI	NDINGS -	Attach Site ma	p snowing s	sampling p	omi locatio	ns, tran	sects, imp	ortant ie	eatures, etc.
Hydrophytic Vegetation	Present?	Yes	NoX						
Hydric Soil Present?		Yes	No X	Is the S	ampled Area				
Wetland Hydrology Pre	sent?	Yes X	No		Wetland?	Υ	es	No	X
Remarks:									
This point was data	rminad not to	ho within a watland a	lue to the lack of	hydrophytic ye	actation and by	drio goilo			
This point was dete	mined not to	be within a wetland o	iue to the lack of	nydropnylic ve	getation and nyt	JIIC SOIIS.			
The curvey erec we	a datarminad	l to be wetter then no	mal at the time o	of our cour					
The survey area wa	is determined	I to be wetter than nor	mai at the time o	or survey.					
HYDROLOGY									
Wetland hydrolog	y Indicators:					Secon	dary Indicators	s (minimum	of two required)
Primary Indicators (minimum of o	one is required; check	all that apply)				Surface Soil C	-	<u> </u>
Surface Water	er (A1)		Aquatic Fauna	a (B13)			Sparsely Vege	etated Conc	ave Surface (B8)
High Water T			_	(B15) (LRR U)		Drainage Patt	erns (B10)	` ,
Saturation (A	, ,	_	_	fide Odor (C1)			Moss Trim Lin		
Water Marks	•			, ,	ving Roots(C3)		Dry-Season W		(C2)
Sediment De	, ,		_	· Reduced Iron (0	- , ,		Crayfish Burro		(-)
Drift Deposits			_	Reduction in Till	•		-		al Imagery (C9)
Algal Mat or	, ,		Thin Muck Su		(,		Geomorphic P		
Iron Deposits	, ,	<u></u>	Other (Explain	, ,			Shallow Aquita		
	-	al Imagery (B7)	_ Other (Explain	ir iir rtornanto)			FAC-Neutral T	, ,	
	ed Leaves (B9						Sphagnum mo		PT III
	d Leaves (Do	·)					opnagnam me)33 (D0) (L 1)	
Field Observations:									
Surface Water Present	2 Vac	No X	Depth (inch	es): N/A					
Water Table Present?	Yes		Depth (inch	· —					
Saturation Present?			_ Depth (inch	· —	Wotland	Hydrology	Brocont?	Voc V	No
(includes capillary fring	Yes	NoX	_ Deptil (illicil	es). <u>-20</u>	· Vvetianu	riyurology	rieseiiti	162 X	NO
, , , , , ,	•	acuse menitering w	all agricl photos	nrovious inon	ations) if availa	hla			
Describe Recorded	Data (stream	n gauge, monitoring w	eii, aeriai priotos,	, previous inspe	ections), ii avalla	ible:			
Remarks:									
Remarks.									
Δ nositive indication	of wetland h	ydrology was observe	ed (at least one n	rimary indicato	r)				
71 positive indication	r or wettaria ii	yarology was observe	d (at least one p	minary maioato	1).				
Other: Cecetal inun	dation								
Other: Coastal inun	dation.								

Sampling Point:	DPA010_U

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft)	% cover	Species?	Status	Number of Dominant Species	
1 Nama Observad					That Are OBL, FACW, or FAC: 0 (A)
2.						,
3.					Total Number of Dominant	
4.						в)
5.						´
6.					Percent of Dominant Species	
•.		0	= Total Cover		·	A/B)
	50% of total cover:		20% of total cover:	0	(/
Sapling Stratum (Plot size:			2070 01 10101 00701.		Prevalence Index Worksheet:	
1 None Observed					Total % Cover of: Multiply by:	
					OBL species 0 x 1 = 0	_
2.					FACW species 0 x 2 = 0	_
3.						-
4					FAC species 0 x 3 = 0 FACU species 0 x 4 = 0	_
5					UPL species 0 x 5 = 0	_
6			= Total Cover		Column Totals: 0 (A) 0	— _(B)
	E0% of total cover:		20% of total cover:	0	Column Totals (A)	— (^{b)}
Shrub Stratum (Plot size:			20% Of total cover.		Prevalence Index = B/A = N/A	
4. Nana Ohaaniad					Prevalence index – B/A – N/A	_
					Hudunghatia Vanatatian Indiastana.	
2					Hydrophytic Vegetation Indicators:	
3					1 - Rapid Test for Hydrophytic Vegetation	
4					2 - Dominance Test is >50% 3 - Prevalence Index is ≤ 3.0 ¹	
5						
6					Problematic Hydrophytic Vegetation ¹ (Explain)	
			= Total Cover	_	1	
			20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
					Definitions of Five Vegetation Strata:	
2.					Tree - Woody plants, excluding woody vines,	
3					approximately 20 ft (6m) or more in height and 3 in.	
4					(7.6 cm) or larger in diameter at breast height (DBH).	
5					Sapling - Woody plants, excluding woody vines,	
6					approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8					tian 3 iii. (7.0 dii) DBH.	
9					Shrub - Woody plants, excluding woody vines,	
10					approximately 3 to 20 ft (1 to 6 m) in height.	
11					approximately 3 to 20 ft (1 to 6 fff) in neight.	
			= Total Cover		Harb All barbassaya (non woody) planta including	
	50% of total cover:	0	20% of total cover:	0	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size	:30_ft)				herbaceous vines, regardless of size, <u>and</u> woody	
					plants, except woody vines, less than approximately	
2					3 ft (1 m) in height.	
3.					Woody vine All woody vines resembles of height	
4					Woody vine - All woody vines, regardless of height.	
5					<u> </u>	
			= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes NoX	
Remarks: (if observed, list m	norphological adaptat	ions below).			
No positive indication of hydr	ophytic vegetation wa	as observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).	
No vegetation present.						
•						

Depth	Matrix			Redox F	eatures						
inches)	Color (moist)	<u>%</u>	Color (moist)	%_	Type ¹	Loc ²	Texture		Remarks		
0-10	10YR 3/2_	100	None	lone — — —				Sandy Clay Shell hash, gravel, and			
				material					al from road mixed		
								with ma	atrix		
Type: C=0	Concentration, D=Dep	oletion, RM	=Reduced Matrix, M	1S=Maske	d Sand Grains.	² Location: P	L=Pore Lining, M=N				
Hydric Soi	ls Indicators: (Appl	icable to a	III LRRs, unless ot	herwise n	oted.)		Indicators for P	roblematio	: Hydric Soils ³ :		
Histos	ol (A1)		Polyva	ue Below	Surface (S8) (L	RR S, T, U)	1 cm Muck	(A9) (LRR	O)		
Histic	Epipedon (A2)		Thin Da	ark Surfac	e (S9) (LRR S,	T, U)	2 cm Muck (A10) (LRR S)				
Black	Histic (A3)		Loamy	Mucky Mir	neral (F1) (LRR	(LRR O) Reduced Vertic (F18) (outside MLRA 150)					
Hydro	gen Sulfide (A4)		Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19)					Loamy Gleyed Matrix (F2) Piedmont Floodplain Soil			
Stratifi	ed Layers (A5)		Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20					my Soils (F20)			
Organ	Organic Bodies (A6) (LRR P, T, U)			Dark Surfa	ace (F6)		(MLRA 153B)				
5 cm N	5 cm Mucky Mineral (A7) (LRR P, T, U)			ed Dark Su	d Dark Surface (F7) Red Parent Material (TF2)				F2)		
Muck	luck Presence (A8) (LRR U)			Depressio	ns (F8)		Very Shallo	w Dark Sur	face (TF12)		
1 cm N	_ 1 cm Muck (A9) (LRR P, T)			10) (LRR	U)		Other (Expl	ain in Rema	arks)		
Deplet	ted Below Dark Surfa	ce (A11)	Deplete	ed Ochric ((F11) (MLRA 1 5	51)	•				
Thick	Dark Surface (A12)		Iron-Ma	anganese	Masses (F12) (LRR O, P, T)		tors of hydrophytic vegetation and			
Coast	Prairie Redox (A16)	(MLRA 150	· —	,	F13) (LRR P, T	, U)	wetland hydrology must be present, unless disturbed or problematic.				
Sandy	Mucky Mineral (S1)	(LRR O, S		•	7) (MLRA 151)		uooo u	, , , , , , , , , , , , , , , , , , ,	5. 52.5a		
Sandy	Gleyed Matrix (S4)		Reduce	ed Vertic (I	F18) (MLRA 15	0A, 150B)					
	Redox (S5)			•	lain Soils (F19)	. ,					
	ed Matrix (S6)		Anoma	lous Brigh	t Loamy Soils (F	(MLRA 14	9A, 153C, 153D)				
Dark S	Surface (S7) (LRR P,	S, T, U)									
Restrictive	Layer (if observed)	:									
Type:	.,										
	nches):					Hvdrid	Soil Present? Y	es	No X		
			_								
Remarks:						•					

Project/Site:	Bluewater SPM		County:	Nueces	S	ampling Date:	January 29, 2019
Applicant/Owner:	Lloyd Engi		Sta			Sample Point:	
··· ——		J. Mitchell	Section, Townshi	p. Range:		. <u></u> N/A	
Landform (hillslope, terrace		ch	Local relief (conc		none): N	one Slope (%): 0-5
Subregion (LRR or MLRA)	· ·		Lat: 27.8				tum: North American Datum 1983
Soil Map Unit Name:		n clay loam, rarely fl			· —	fication:	E2EM1N
· -	onditions on the site typical for t			No		in in Remarks.)	
, ,	Soil No ,or Hydrolo	•	icantly disturbed?		_ ` ' '	,	X No
	Soil No ,or Hydrolo		ally problematic?			in any answers in	
			•	·	•	•	,
SUMMART OF FIN	DINGS - Attach site m	ap snowing s	ampling poir	it location	s, transec	ıs, important	reatures, etc.
Hydrophytic Vegetation P	Present? Yes X	No					
Hydric Soil Present?	Yes X	No	Is the Samp	oled Area			
Wetland Hydrology Prese	ent? Yes X	No	within a We	etland?	Yes_	X No	
Remarks:							
This point was detern	nined to be within a wetland du	e to the presence o	f all 3 wetland crite	aria			
This point was detern	lined to be within a wetland du	e to the presence o	i ali 3 welland chie	на.			
The aurieu erea was	datarminad to be watter than a	armal at the time of	Faumiau				
The survey area was	determined to be wetter than r	iormai at the time of	i survey.				
HYDROLOGY							
Wetland hydrology	Indicators:				Secondary	Indicators (minimu	m of two required)
Primary Indicators (m	inimum of one is required; che	ck all that apply)				ce Soil Cracks (B	
X Surface Water	(A1)	X Aquatic Fauna	ı (B13)		X Spars	sely Vegetated Co	ncave Surface (B8)
X High Water Ta	· ·		(B15) (LRR U)			age Patterns (B10	, ,
Saturation (A3)	· · ·	X Hydrogen Sulf				Trim Lines (B16)	,
Water Marks (E			ospheres on Living	Roots(C3)		Season Water Tab	le (C2)
Sediment Depo	•		educed Iron (C4)	, (==,		ish Burrows (C8)	(-)
Drift Deposits (• •		eduction in Tilled S	Soils (C6)		ation Visible on A	erial Imagery (C9)
Algal Mat or Cr	· ·	Thin Muck Sur		(00)		norphic Position ([, ,
Iron Deposits (I	· ·	Other (Explain	, ,			ow Aquitard (D3)	,
	ble on Aerial Imagery (B7)	Out of (Explain	in romano,			Neutral Test (D5)	
Water-Stained	= - , ,					gnum moss (D8)	I PP T III
Water-Stained	Loaves (Bo)					gridin moss (Do) (Little 1, O)
Field Observations:							
Surface Water Present?	YesX No	Depth (inche	es): 3				
Water Table Present?	Yes X No	Depth (inche	· ——				
Saturation Present?			, <u> </u>	Wotland Hy	drology Pres	ont? Voc	Y No
(includes capillary fringe)	Yes NoX	Deptir (inche	-s). <u>-20</u>	wetiand my	diology Fies	ent: 1es	<u>x</u> NO
	Octo (atraam gauga manitaring	well periol photos	nraviava inanastia	na) if available	•		
Describe Recorded D	oata (stream gauge, monitoring	well, aeriai priotos,	previous inspectio	ons), ii avaliabie	e.		
Domonico							
Remarks:							
Δ nositive indication of	of wetland hydrology was obser	ved (at least one or	imary indicator)				
A positive indication of	n welland flydrology was obser	ved (at least one pi	inary indicator).				
A positive indication of	of watland budgalagy was about	red (at least two as	aandan indiaatar	-)			
A positive indication of	of wetland hydrology was obser	ved (at least two se	condary indicators	5).			

Sampling Point:	DPA011_PEM

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 30 ft.)	% cover	Species?	Status	Number of Dominant Species	
	70 00VCI	ореою:	Otatus	·	A)
				That Ale OBE, I AOW, OI I AO.	^)
2				Total Number of Densire and	
3				Total Number of Dominant	ρ,
4	-			Species Across All Strata: 2 (E	B)
5					
6	-	<u> </u>		Percent of Dominant Species	
	0	= Total Cover		That Are OBL, FACW, or FAC: (A	A/B)
50% of total cov	er:0	20% of total cover:	0		
Sapling Stratum (Plot size:30 ft)				Prevalence Index Worksheet:	,
1. None Observed		<u> </u>		Total % Cover of: Multiply by:	
2				OBL species 120 x 1 = 120	
3.				FACW species 0 x 2 = 0	_
4.	-	·		FAC species 0 x 3 = 0	_
5.				FACU species 0 x 4 = 0	
6.				UPL species 0 x 5 = 0	_
·	0	= Total Cover		Column Totals: 120 (A) 120	— (B)
50% of total con		20% of total cover:	0	(A) 120	— ' ⁵ /
50% of total cov <u>Shrub Stratum</u> (Plot size: 30 ft.)	oi	2070 OI LOLAI COVEI.		Prevalence Index = B/A = 1.00	
1. None Observed				Frevalence muex - D/A - 1.00	_
				Undership Vagatation Indicates	
2	-			Hydrophytic Vegetation Indicators:	
3				1 - Rapid Test for Hydrophytic Vegetation	
4				X 2 - Dominance Test is >50%	
5				X 3 - Prevalence Index is ≤ 3.0 ¹	
6				Problematic Hydrophytic Vegetation ¹ (Explain)	
	0	= Total Cover			
50% of total cov	er:0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size: 30 ft.)				be present, unless disturbed or problematic.	
Avicennia germinans	70	Yes	OBL	Definitions of Five Vegetation Strata:	
2. Salicornia depressa	40	Yes	OBL	Tree - Woody plants, excluding woody vines,	
3. Spartina alterniflora	10	No	OBL	approximately 20 ft (6m) or more in height and 3 in.	
4.		·		(7.6 cm) or larger in diameter at breast height (DBH).	
5.					
6.				Sapling - Woody plants, excluding woody vines,	
7.				approximately 20 ft (6 m) or more in height and less	
8.				than 3 in. (7.6 cm) DBH.	
9.					
10.				Shrub - Woody plants, excluding woody vines,	
11.				approximately 3 to 20 ft (1 to 6 m) in height.	
	120	= Total Cover			
50% of total cov		•	24	Herb - All herbaceous (non-woody) plants, including	
	ei	20% Of total cover.		herbaceous vines, regardless of size, <u>and</u> woody	
Woody Vine Stratum (Plot size: 30 ft.)				plants, except woody vines, less than approximately	
1. None Observed				3 ft (1 m) in height.	
2				o it (1 m) in noight.	
3				Woody vine - All woody vines, regardless of height.	
4				Woody vine - All woody vines, regardless of neight.	}
5					
		= Total Cover		Hydrophytic	
50% of total cov	er: 0	20% of total cover:	0	Vegetation	
				Present? Yes <u>X</u> No	
Remarks: (if observed, list morphological adap	tations below).			
A positive indication of hydrophytic vegetation v	vas observed	(>50% of dominant	species index	xed as OBL, FACW, or FAC).	
7. postavo maioatem et nyaropnytte vogetatiem t	140 00001104	(* 0070 or dominant	opooloo mao	100 de 051, 171011, 61 1710).	
A positive indication of hydrophytic vegetation v	vas ohserved	(Prevalence Index is	s < 3 00)		
A positive indication of hydrophytic vegetation (vas obseiveu	(i revalence muex is	o = 0.00j.		

Depth	Matrix			Redox F	eatures			
inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-12	10Y 4/1_	_98_	10YR 5/8_	_2_	C	M	Clay	
						2	. 	
	Concentration, D=Depsilons Indicators: (Appl					Location: P	L=Pore Lining, M=Matri	x. ematic Hydric Soils ³ :
Histoso		icabic to a	•		Surface (S8) (LF	RR S. T. U)	1 cm Muck (A9)	•
	Epipedon (A2)				e (S9) (LRR S, 1		2 cm Muck (A10	
	Histic (A3)				neral (F1) (LRR			(F18) (outside MLRA 150A,
— Hydrog	gen Sulfide (A4)		X Loamy	Gleyed M	atrix (F2)	•	Piedmont Flood	plain Soils (F19) (LRR P, S,
Stratifie	ed Layers (A5)		X Deplete	ed Matrix (F3)		Anomalous Brig	ht Loamy Soils (F20)
Organi	c Bodies (A6) (LRR	P, T, U)	Redox	Dark Surfa	ace (F6)		(MLRA 153B)	
5 cm M	lucky Mineral (A7) (L	.RR P, T, U	Deplete	ed Dark Su	urface (F7)		Red Parent Mat	erial (TF2)
Muck F	Presence (A8) (LRR	U)	Redox	Depressio	ns (F8)		Very Shallow D	ark Surface (TF12)
1 cm M	Muck (A9) (LRR P, T)		Marl (F	10) (LRR	U)		Other (Explain i	n Remarks)
Deplet	ed Below Dark Surfa	ce (A11)	Deplete	ed Ochric	(F11) (MLRA 15	1)		
Thick [Dark Surface (A12)		Iron-Ma	anganese	Masses (F12) (I	LRR O, P, T)		hydrophytic vegetation and
Coast	Prairie Redox (A16) ((MLRA 150	A)Umbric	Surface (F13) (LRR P, T,	U)		ology must be present, bed or problematic.
Sandy	Mucky Mineral (S1)	(LRR O, S)	Delta C	Ochric (F17	7) (MLRA 151)		uniess distun	bed of problematic.
Sandy	Gleyed Matrix (S4)		Reduce	ed Vertic (F18) (MLRA 150	A, 150B)		
Sandy	Redox (S5)		Piedmo	nt Floodp	lain Soils (F19) (MLRA 149A)		
Strippe	ed Matrix (S6)		Anoma	lous Brigh	t Loamy Soils (F	20) (MLRA 14 9	9A, 153C, 153D)	
Dark S	Surface (S7) (LRR P,	S, T, U)						
Restrictive	Layer (if observed)	:						
Type:								
Depth (ir	nches):					Hydric	Soil Present? Yes	X No
Remarks:								
A positive in	ndication of hydric soi	l was obse	rved.					

Project/Site:		Bluewater SPM		County:	Nueces	Sampling	Date: Ja	anuary 29, 2019
Applicant/Owner:		Lloyd Engi	neering	Sta			Point:	
Investigator(s):			Section, Townshi					
Landform (hillslope, ter				Local relief (conc	ave, convex, no	ne): None	Slope (%):	0-5
Subregion (LRR or MLI	RA):	Non	e	Lat:27.8	395072 Lo	ong: -97.13051	7 Datum:	North American Datum 1983
Soil Map Unit Name:		ljan	n clay loam, rarely f	flooded		NWI Classification:		N/A
Are climatic / hydrologic	conditions on	• • •	•	`		(if no, explain in Re	,	
Are Vegetation	No,Soil	No ,or Hydrolog				ircumstances" prese		
Are Vegetation	No,Soil	No ,or Hydrolog	gy No natur	rally problematic?	(If ne	eeded, explain any a	nswers in Ren	narks.)
SUMMARY OF F	INDINGS -	Attach site m	ap showing s	sampling poir	nt locations.	, transects, im	portant fea	atures, etc.
Hydrophytic Vegetation	n Present?	Yes	NoX					
Hydric Soil Present?		Yes		Is the Samp	oled Area			
Wetland Hydrology Pi	esent?	Yes	No X	within a We		Yes	No	X
, 3,								
Remarks:								
This point was de	ermined not to	be within a wetland	d due to the lack of	all three wetland c	riteria.			
The survey area v	as determined	d to be wetter than r	normal at the time o	of survey.				
HYDROLOGY								
Wetland hydrolo	gy Indicators:	 :				Secondary Indicato	rs (minimum o	f two required)
Primary Indicators	(minimum of c	one is required; che	ck all that apply)			Surface Soil		two required)
Surface Wa	-	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Aquatic Fauna	a (B13)			, ,	ve Surface (B8)
High Water	` ,	_		(B15) (LRR U)		Drainage Pat		o curido (Bo)
Saturation (_		fide Odor (C1)		Moss Trim Li		
Water Mark	•	_		cospheres on Living	1 Roots(C3)		Nater Table (C	22)
	eposits (B2)	_		Reduced Iron (C4)	, 10003(00)	Crayfish Burr	,	,2)
		_		Reduction in Tilled S	Soile (C6)		sible on Aerial	Imagany (CO)
Drift Depos		_			oolis (CO)			illagery (C9)
Algal Mat o	, ,	_	Thin Muck Su	, ,		Geomorphic	, ,	
Iron Deposi			Other (Explain	n in Remarks)		Shallow Aqui	, ,	
		al Imagery (B7)				FAC-Neutral		
water-Stair	ned Leaves (B9	3)				Spnagnum m	noss (D8) (LRF	(I, U)
Field Observations:								
Surface Water Preser	ıt? Yes	NoX	Depth (inch	es): N/A				
Water Table Present?		No X		<i>'</i>				
Saturation Present?	Yes	No X		es): >20	Wetland Hyd	rology Present?	Yes	No X
(includes capillary frin								
Describe Recorde	d Data (stream	n gauge, monitoring	well, aerial photos,	, previous inspectio	ns), if available:			
Remarks:								
No positive indica	tion of wetland	hydrology was obse	arved					
No positive indica	ion or wetland	Trydrology was obse	erveu.					

Name Observed Name Observe			Absolute	Dominant	Indicator	Dominance Test worksheet:	
None Observed	Tree Stratum (Plot size:	30 ft.)				Number of Dominant Species	
2 Total Number of Dominant Species Across All Strata: 5 (B) 5	4. Name Observed					•	A)
Total Number of Dominant Species						(-,
Species Across All Strata; S (B)				-		Total Number of Dominant	
Percent of Dominant Species							R)
Percent of Daminant Species That Are OBL, FACW, precise That Are OBL, That OBL,						Opecies Across Air Otrata.	D)
That Are OBL, FACW, or FAC: 40% (A/B)				·		Dercent of Deminant Species	
Saping Stratum (Plot size: 30 ft None Observed 1. None Observed	0			- Total Cover		·	۸ /D)
Sapling Stratum (Plot size: 30		500/ 51 1 1			•	That Are OBL, FACW, OF FAC. 40% (A	A/D)
Total % Cover of:	0 1: 0: (5: :			20% of total cover:		Prevalence Index Worksheet	
2 3 3 3 4 5 5 6 5 6 6 6 6 6 6	· - · · -	<u>30 ft.</u>)					
## A							_
## FAC Species 20	2					· — — — — — — — — — — — — — — — — — — —	_
FACU species Section				·		· — — — — — — — — — — — — — — — — — — —	_
Column Totals: Ts	4						_
Column Totals: 75							_
Shrub Stratum	6					UPL species15 x 5 =75	_
Shrub Stratum			0	= Total Cover		Column Totals: (A) (5	(B)
1. Schinus terebinthifolia		50% of total cover:	0	20% of total cover:	0		
2. Tamarix ramosissima 3.	Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = 3.53	
3.	1. Schinus terebinthifolia		20	Yes	FAC		
2 - Dominance Test is >50% 5.	2. Tamarix ramosissima		15	Yes	FACW	Hydrophytic Vegetation Indicators:	
2 - Dominance Test is >50% 5.	3.					1 - Rapid Test for Hydrophytic Vegetation	
5. 3 - Prevalence Index is ≤ 3.0 ¹ Problematic Hydrophytic Vegetation ¹ (Explain) Herb Stratum (Plot size: 30 ft.) 15						2 - Dominance Test is >50%	
Problematic Hydrophytic Vegetation (Explain)	_					3 - Prevalence Index is ≤ 3.0 ¹	
Herb Stratum (Plot size: 30 ft.) 1. Opuntia engelmannii				·		Problematic Hydrophytic Vegetation ¹ (Explain)	
Solidation 17.5 20% of total cover: 7 1 1 1 1 1 1 1 1 1	·		35	= Total Cover			
Depresent, unless disturbed or problematic. Definitions of Five Vegetation Strata: Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).		50% of total cover:			7	¹ Indicators of hydric soil and wetland hydrology must	
1. <u>Opuntia engelmannii</u> 2. <u>Trifollum repens</u> 3. <u>Oynodon dactylon</u> 4	Herh Stratum (Plot size:			2070 Of total cover.			
2. Trifolium repens 10 Yes FACU 3. Cynodon dactylon 15 Yes FACU 4.	· · · · · · · · · · · · · · · · · · ·	<u> </u>	15	Vec	LIDI		
3. Cynodon dactylon 4						_	
4							
Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, approximately 3 ft (1 m) in height. Woody Vine - All woody vines, regardless of height. Woody vine - All woody vines, regardless of height. Hydrophytic Vegetation Present? Yes NoX			15	<u>res</u>	FACU		
Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine - All woody vines, regardless of height. Woody vine - All woody vines, regardless of height. Hydrophytic Vegetation Present? Yes NoX						(7.6 cm) or larger in diameter at breast height (DBH).	
7						Sanling Woody plants excluding woody vines	
than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Woody Vine Stratum (Plot size: 30 ft.) None Observed None Observ							
9.							
Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Woody Vine Stratum (Plot size: 30 ft.) 1. None Observed 2. 3. 4. 5. 5. 5. 5. 5. 5. 5						than 3 in. (7.6 cm) DBn.	
approximately 3 to 20 ft (1 to 6 m) in height. 40							
40	10						
Solid total cover: 20 20% of total cover: 8 Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine - All woody vines, regardless of height.	11					approximately 3 to 20 ft (1 to 6 m) in height.	
Moody Vine Stratum (Plot size: 30 ft.) 1. None Observed 2. 3 ft (1 m) in height. 4. 5.			40				
1. None Observed 2		50% of total cover:	20	20% of total cover:	8	, ,,,,	
2	Woody Vine Stratum (Plot size:	30 ft)					
3	1. None Observed						
3	2					3 ft (1 m) in height.	
4							
5						Woody vine - All woody vines, regardless of height.	
O							
50% of total cover: 0 20% of total cover: 0 Vegetation Present? Yes No X Remarks: (if observed, list morphological adaptations below).			0	= Total Cover		Hydrophytic	
Present? YesNoX		50% of total cover:	0	20% of total cover:	0		
Remarks: (if observed, list morphological adaptations below).						_	
	Remarks: (if observed list mo	ornhological adaptati	ions helow	1		1	
No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC− or drier).	•						
	No positive indication of hydro	phytic vegetation wa	as observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).	

US Army Corps of Engineers

Depth	Matrix		-	Redox F	eatures						
inches)	Color (moist)	<u>%</u>	Color (moist)	%_	Type ¹	Loc ²	Texture	Remarks			
0-8	10YR 4/2	100	None				Sandy Clay	Shovel Restriction			
		<u></u>									
			l=Reduced Matrix, Mall LRRs, unless of			² Location: P	L=Pore Lining, M=N	Matrix.			
Histosol (A1)			,		Surface (S8) (L	RR S. T. U)	1 cm Muck (A9) (LRR O)				
	pipedon (A2)				e (S9) (LRR S,		2 cm Muck (A10) (LRR S)				
Black Histic (A3)					neral (F1) (LRR	Reduced Vertic (F18) (outside MLRA 150A,E					
Hydrogen Sulfide (A4)				Gleyed Ma		Piedmont Floodplain Soils (F19) (LRR P, S, T					
Stratified Layers (A5)				ed Matrix (F	` ,		Anomalous Bright Loamy Soils (F20)				
Organic Bodies (A6) (LRR P, T, U)			Redox	Dark Surfa	rce (F6)	(MLRA 153B)					
5 cm Mucky Mineral (A7) (LRR P, T, U)			J) Deplete	ed Dark Su	ırface (F7)		Red Parent Material (TF2)				
Muck Presence (A8) (LRR U)			Redox	Depression	ns (F8)	Very Shallow Dark Surface (TF12)					
1 cm Muck (A9) (LRR P, T)			Marl (F	10) (LRR l	J)	Other (Explain in Remarks)					
 Deplete	ed Below Dark Surfa	ice (A11)	Deplete	ed Ochric (F11) (MLRA 1	51)					
Thick Dark Surface (A12)			Iron-Ma	anganese N	Masses (F12) (LRR O, P, T)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S)			OA) Umbric	Surface (F	13) (LRR P, T	, U)					
				chric (F17) (MLRA 151)						
	Gleyed Matrix (S4)	· —	Reduced Vertic (F18) (MLRA 150A, 150B)								
<u> </u>					, .	Soils (F19) (MLRA 149A)					
<u> </u>						(F20) (MLRA 149A, 153C, 153D)					
Dark S	urface (S7) (LRR P,	S, T, U)									
Restrictive	Layer (if observed)):									
Type:	Gravel/Concrete										
Depth (in	ches): 8		Hydric				Soil Present? Yes No X				

No positive indication of hydric soils was observed.

Project/Site:	Bluewater SPM	Co	ounty:	Nueces	5	Sampling Date:	January 29, 2019
Applicant/Owner:	Lloyd Engine		Stat			Sample Point:	
• • • • • • • • • • • • • • • • • • • •	E. Munscher and	J. Mitchell Se	ection, Township	o, Range:		N/A	
Landform (hillslope, terrace			ocal relief (conca	ive, convex, n	none): N	lone Slope ((%): 0-5
Subregion (LRR or MLRA):			Lat: 27.8				itum: North American Datum 1983
Soil Map Unit Name:	ljam (clay loam, rarely floo	ded		NWI Class	sification:	E2USP
Are climatic / hydrologic co	onditions on the site typical for thi	s time of year? (Yes / No)	No	(if no, expla	ain in Remarks.)	
Are Vegetation No	,Soil No ,or Hydrology	No significa	ntly disturbed?	Are "Normal	Circumstance	es" present? Yes	X No
Are Vegetation No	,Soil No ,or Hydrology	No naturally	problematic?	(If	needed, expla	ain any answers in	Remarks.)
SUMMARY OF FINI	DINGS - Attach site ma	p showing sar	nplina poin	t locations	s. transec	ts. important	features, etc.
		J	1 31				
Hydrophytic Vegetation P		No					
Hydric Soil Present?	YesX	No	Is the Samp			V N-	
Wetland Hydrology Prese	ent? Yes X	No	within a We	tiand?	Yes_	X No)
Remarks:							
This point was determ	nined to be within a wetland due	to the presence of al	I 3 wetland criter	ria.			
The survey area was	determined to be wetter than no	rmal at the time of su	ırvey.				
HYDROLOGY							
Wetland hydrology I	ndicators:				Secondary	Indicators (minimu	ım of two required)
Primary Indicators (mi	inimum of one is required; check	all that apply)			Surfa	ace Soil Cracks (B	6)
Surface Water	(A1) <u>X</u>	_ Aquatic Fauna (B	113)		X Spai	rsely Vegetated Co	ncave Surface (B8)
High Water Tab	ole (A2)	_ Marl Deposits (B	15) (LRR U)		Drai	nage Patterns (B10	0)
Saturation (A3)	<u>_x</u>	_ Hydrogen Sulfide	Odor (C1)		Mos	s Trim Lines (B16)	
Water Marks (E	31)	_ Oxidized Rhizosp	heres on Living	Roots(C3)	Dry-	Season Water Tab	ole (C2)
Sediment Depo	sits (B2)	_ Presence of Redu	uced Iron (C4)		Cray	fish Burrows (C8)	
Drift Deposits (F	B3)	_ Recent Iron Redu	iction in Tilled S	oils (C6)	Satu	ıration Visible on A	erial Imagery (C9)
Algal Mat or Cru	ust (B4)	_ Thin Muck Surfac	ce (C7)		Geo	morphic Position ([02)
Iron Deposits (E	35) <u>X</u>	Other (Explain in	Remarks)		Shal	low Aquitard (D3)	
Inundation Visit	ble on Aerial Imagery (B7)				X FAC	-Neutral Test (D5)	
Water-Stained	Leaves (B9)				Sph	agnum moss (D8)	(LRR T, U)
				1			
Field Observations:							
Surface Water Present?	Yes NoX	_ Depth (inches):					
Water Table Present?	Yes NoX	_ Depth (inches):					
Saturation Present?	Yes NoX	_ Depth (inches):	>20	Wetland Hy	drology Pres	sent? Yes	X No
(includes capillary fringe)				\			
Describe Recorded Da	ata (stream gauge, monitoring w	ell, aerial photos, pre	evious inspection	ns), if available	e:		
Remarks:							
Kemarks.							
A positive indication o	of wetland hydrology was observe	ed (at least one prima	ary indicator).				
·			,				
A positive indication o	of wetland hydrology was observe	ed (at least two seco	ndary indicators).			
Other: Coastal inunda	ition.						

Tree Stratum (Plot size: 30 ft.)

1. None Observed

Absolute

% cover

Dominant

Species?

Indicator

Status

S	ampling Point: _	DP	A013_PE	М	
Dominance Test w	vorksheet:				
Number of Dominar	nt Species				
That Are OBL, FAC	CW, or FAC:	1		(A)	
T					
Total Number of Do				(D)	
Species Across All	Strata:	1		(B)	
Percent of Dominar	nt Species				
That Are OBL, FAC	•	100	%	(A/B)	
Prevalence Index	Worksheet:				
Total % C	Cover of:	Multiply by:			
OBL species	70	x 1 = _	70		
FACW species	0	x 2 = _	0		
FAC species	0	x 3 = _	0		
FACU species	0	x 4 = _	0		
UPL species	0	x 5 = _	0		
Column Totals: _	70	(A) _	70	(B)	
Prevalence	e Index = B/A =		1.00		
Hydrophytic Vege	tation Indicato	rs:			
	Test for Hydrop		ation		
	ance Test is >50				

)				
			= Total Cover	
	50% of total cover: _	0	_ 20% of total cover: _	0
Sapling Stratum (Plot size:	30 ft.)			
. None Observed				
l				
·	<u>_</u>			
	_	0	_= Total Cover	
	50% of total cover: _	0	_ 20% of total cover: _	0
Shrub Stratum (Plot size:	30 ft.)			
Mana Ohaanaal				
			<u> </u>	
		0	_= Total Cover	
	50% of total cover:		_ 20% of total cover: _	0
Herb Stratum (Plot size:	_		- ' -	
. Avicennia germinans	<u></u> /	50	Yes	OBL
. Salicornia depressa		10		OBL
. Spartina alterniflora		10		OBL
				ODL
•				
•				
·				
		70	= Total Cover	
			= Total Cover	1/
	50% of total cover:		= Total Cover 20% of total cover:	14
Voody Vine Stratum (Plot size:	50% of total cover:		_	14
	50% of total cover:		_	14
Noody Vine Stratum (Plot size:	50% of total cover:		_	14
	50% of total cover:		_	14
Noody Vine Stratum (Plot size:	50% of total cover:		_	14
Noody Vine Stratum (Plot size:	50% of total cover:	35	20% of total cover: _ 	14
Noody Vine Stratum (Plot size: None Observed	50% of total cover:	35	_	

X 3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Five Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic				
Vegetation				
Present?	Yes _	Х	_ No _	

 $\label{lem:reconstruction} Remarks: \ (\text{if observed, list morphological adaptations below}).$

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

Profile Desc		to the depth n	eeded to doc			onfirm the abs	ence of indicators.)	
Depth	Matrix				eatures 1	. 2		
(inches)	Color (moist)	<u>%</u> C	olor (moist)	%_	Type'	Loc ²	Texture	Remarks
<u>0-16</u>	10Y 4/1	98	10YR 4/6	2	C	M	Clay	
1								
	oncentration, D=Dep					² Location: P	L=Pore Lining, M=Mat	
Hydric Soils	s Indicators: (Appl	icable to all LR	Rs, unless ot	herwise n	oted.)		Indicators for Prob	olematic Hydric Soils ³ :
Histoso	l (A1)		Polyva	lue Below	Surface (S8) (L	.RR S, T, U)	1 cm Muck (A9) (LRR O)
Histic E	pipedon (A2)		Thin D	ark Surfac	e (S9) (LRR S,	T, U)	2 cm Muck (A1	0) (LRR S)
—— Black H	listic (A3)		Loamy	Mucky Mir	neral (F1) (LRR	R O)	Reduced Vertic	(F18) (outside MLRA 150A,B)
	en Sulfide (A4)		X Loamy	-	, , ,	,		dplain Soils (F19) (LRR P, S, T)
	ed Layers (A5)		X Deplete	-	, ,			ght Loamy Soils (F20)
	• ()	D T 11)		,				grit Loarry Soils (1 20)
	Bodies (A6) (LRR	· · · · ·		Dark Surfa	` '		(MLRA 153B)	(TEO)
	ucky Mineral (A7) (L	· · · · · · ·			urface (F7)		Red Parent Ma	
	resence (A8) (LRR	-		Depressio	` '			Park Surface (TF12)
1 cm M	uck (A9) (LRR P, T))	Marl (F	10) (LRR	U)		Other (Explain	in Remarks)
Deplete	ed Below Dark Surfa	ce (A11)	Deplete	ed Ochric ((F11) (MLRA 1	51)		
Thick D	ark Surface (A12)		Iron-Ma	anganese	Masses (F12)	(LRR O, P, T)	³ Indicators o	f hydrophytic vegetation and
Coast F	Prairie Redox (A16) ((MLRA 150A)	 Umbrio	Surface (F13) (LRR P, T	. U)		rology must be present,
	Mucky Mineral (S1)	•		,	7) (MLRA 151)	, -,	unless distu	bed or problematic.
	Gleyed Matrix (S4)	(=::::0,0)		•	F18) (MLRA 15	OA 150R)		
	- , ,							
	Redox (S5)				lain Soils (F19)	-		
	d Matrix (S6)		Anoma	lous Brigh	t Loamy Soils (F20) (MLRA 149	9A, 153C, 153D)	
Dark Si	urface (S7) (LRR P,	S, T, U)						
Type: Depth (in						Hydric	Soil Present? Yes	X No
Remarks:								
Remarks:								
A positive in	dication of hydric soi	Il was observed.						

Project/Site:	E	Bluewater SPM		County:	Nueces	3	Sampling	Date: J	anuary 29, 2019
Applicant/Owner:		Lloyd Engin	eering	· · · —	State:	Texas		oint:	
Investigator(s):	E. Munsche	r and	J. Mitchell	Section, Towr	- nship, Range:			N/A	
Landform (hillslope, terra					oncave, convex	. none):	None		: 0-5
Subregion (LRR or MLR.		None			27.894971				1: North American Datum 1983
Soil Map Unit Name:	,		clay loam, rarely f				Classification:		N/A
Are climatic / hydrologic	conditions on				No		explain in Rer		
		No ,or Hydrology			d? Are "Norm	`	•	,	X No
		No ,or Hydrology		rally problemation			explain any a		
CUMMARY OF FU				• •			•		ŕ
SUMMARY OF FI	ADINGS -	Attach Site ma	ip snowing s	sampling p	omi locatio	ns, tran	sects, imp	ortant ie	eatures, etc.
Hydrophytic Vegetation	Present?	Yes	NoX						
Hydric Soil Present?		Yes	No X		ampled Area				
Wetland Hydrology Pre	sent?	Yes	No X	within a	Wetland?	Υ	es	No_	X
Remarks:									
This point was data	rminad not to	he within a wotland	due to the look of	all three wetlen	d oritorio				
This point was dete	mined not to	be within a wetland	due to the lack of	all triree wettan	d Criteria.				
The our year area was	a datarminad	to be wetter then no	rmal at the time of	of aumiou					
The survey area wa	s determined	to be wetter than no	imai at the time o	or survey.					
HYDROLOGY									
Wetland hydrolog	/ Indicators:					Secon	dary Indicator	s (minimum	of two required)
Primary Indicators (minimum of o	ne is required; check	(all that apply)				Surface Soil (•	
Surface Wate	er (A1)		Aquatic Fauna	a (B13)			Sparsely Veg	etated Conca	ave Surface (B8)
High Water T				(B15) (LRR U)			Drainage Patt		,
Saturation (A		<u> </u>	_	fide Odor (C1)			Moss Trim Lir		
Water Marks	•	_		ospheres on Liv	ving Roots(C3)		Dry-Season V	, ,	C2)
Sediment De	. ,		_	Reduced Iron (C			Crayfish Burro		,
Drift Deposits	, , ,	_	_	Reduction in Tille	•		-		l Imagery (C9)
Algal Mat or			— Thin Muck Su		,		Geomorphic F		
Iron Deposits		_	— Other (Explair				Shallow Aquit		
		I Imagery (B7)	_ ` `	,			FAC-Neutral		
	d Leaves (B9						Sphagnum m		R T. U)
		,					1 3	(- / (, -,
Field Observations:									
Surface Water Present	? Yes	No X	Depth (inch	es): N/A					
Water Table Present?	Yes		' ` Depth (inch	· ——					
Saturation Present?	Yes			, 	Wetland I	Hydrology	Present?	Yes	No X
(includes capillary fring						.,			
Describe Recorded	Data (stream	gauge, monitoring v	ell aerial photos	previous inspe	ctions) if availa	ble [.]			
Dodding Roddiada	Data (otroam	gaago, montoring v	ion, aonai priotos,	, proviodo inopo	otiono), ii avalia	DIO.			
Remarks:									
Kemarks.									
No positive indication	on of wetland	hydrology was obser	ved.						
'		, 3,							

					Dominance Test worksheet:		
		Absolute	Dominant	Indicator			
Tree Stratum (Plot size:	30 ft.)	% cover	Species?	Status	Number of Dominant Species		
•			·		That Are OBL, FACW, or FAC:	2	(A)
2			. <u> </u>				
3			. <u> </u>		Total Number of Dominant		
4					Species Across All Strata:	4	(B)
5							
6					Percent of Dominant Species		
		0	= Total Cover		That Are OBL, FACW, or FAC:	50%	(A/B)
	50% of total cover:	0	20% of total cover:	0			
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:		
1. None Observed					Total % Cover of:	Multiply by:	<u>:</u>
2.	<u> </u>				OBL species 15	x 1 = 15	
3.			· <u></u>		FACW species 0	x 2 = 0	
4.					FAC species 30	x 3 = 90	
5.		-			FACU species 0	x 4 = 0	
6.			<u> </u>		UPL species 40	x 5 = 200	
		0	= Total Cover		Column Totals: 85	(A) 305	(B)
	50% of total cover:		20% of total cover:	0		(,,)	(_)
Shrub Stratum (Plot size:			20% of total cover.		Prevalence Index = B/A =	3.59	
	·				Frevalence index – B/A –		
			<u> </u>		Hydrophytic Vegetation Indicate		
2.			·		Hydrophytic Vegetation Indicato		
3.					1 - Rapid Test for Hydrop	, ,	
4			<u> </u>		2 - Dominance Test is >5		
5			<u> </u>		3 - Prevalence Index is ≤		
6			<u> </u>		Problematic Hydrophytic	legetation (Explain))
			= Total Cover				
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetl	and hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or pro	blematic.	
Opuntia engelmannii		15	Yes	UPL	Definitions of Five Vegetation S	trata:	
2. Borrichia frutescens		15	Yes	OBL	Tree - Woody plants, excluding w	oody vines,	
3. Thelesperma filifolium		15	Yes	UPL	approximately 20 ft (6m) or more in	າ height and 3 in.	
4. Oxalis stricta		10	No	UPL	(7.6 cm) or larger in diameter at br	east height (DBH).	
5. Muhlenbergia schreberi		30	Yes	<u>FAC</u>			
6					Sapling - Woody plants, excluding		
7					approximately 20 ft (6 m) or more i	n height and less	
8.					than 3 in. (7.6 cm) DBH.		
9.							
10.			· <u></u>		Shrub - Woody plants, excluding v	woody vines,	
11.			<u></u>		approximately 3 to 20 ft (1 to 6 m)	in height.	
	_	85	= Total Cover				
	50% of total cover	0	20% of total cover:	17	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size			. 2070 01 10141 007011		herbaceous vines, regardless of si	ze, <u>and</u> woody	
1. None Observed					plants, except woody vines, less th	nan approximately	
2.					3 ft (1 m) in height.		
					, ,		
3					Woody vine - All woody vines, rec	ardless of height.	
4			· ———			,	
5	-	0	= Total Cover		Hydrophytic		
	EON of total covers		•	0			
	50% of total cover:	0	20% of total cover:	0	Vegetation	N. V	
					Present? Yes	NoX	
Remarks: (if observed, list m	orphological adaptat	ions below).				
No positive indication of hydro	ophytic vegetation wa	as observe	d (≥50% of dominan	t species ind	exed as FAC- or drier).		
,,	. , 5		,		,		

Depth	Matrix			Redox F	eatures					
inches)	Color (moist)	%_	Color (moist)	%_	Type ¹	Loc ²	Texture	Remarks		
0-8	10YR 3/3	100	None				Sandy Clay Loam	Shovel Restriction		
	Concentration, D=Deplements (Applements)					² Location: P	L=Pore Lining, M=N	natrix.		
•	ol (A1)	ioubio to t	,		Surface (S8) (L	RR S. T. U)		(A9) (LRR O)		
Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T,							2 cm Muck (A10) (LRR S)			
	Histic (A3)	<u> </u>						Reduced Vertic (F18) (outside MLRA 150A,B)		
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)					•		oodplain Soils (F19) (LRR P, S, T			
	ied Layers (A5)		Depleted Matrix (F3)					Bright Loamy Soils (F20)		
	ic Bodies (A6) (LRR	P, T, U)	 '	Dark Surfa	,		(MLRA 153)	• , , ,		
	Mucky Mineral (A7) (L			ed Dark Su	` ,		•	-, Material (TF2)		
	Presence (A8) (LRR		· — ·	Depression	, ,		Very Shallow Dark Surface (TF12)			
	Muck (A9) (LRR P, T)			10) (LRR l	` '		Other (Explain in Remarks)			
	ted Below Dark Surfa			, ,	, F11) (MLRA 1	1)		,		
	Dark Surface (A12)	, ,		•	Masses (F12) (•	³ Indicators of hydrophytic vegetation and			
	Prairie Redox (A16)	(MLRA 15		•	=13) (LRR P, T		wetland hydrology must be present,			
	Mucky Mineral (S1)			•) (MLRA 151)	,	unless dis	sturbed or problematic.		
	Gleyed Matrix (S4)	,-		,	7 (MLRA 15	OA, 150B)				
	Redox (S5)			•	ain Soils (F19)	•				
	ed Matrix (S6)			•	, ,		9A, 153C, 153D)			
	Surface (S7) (LRR P,	S, T, U)			, ,	, ,	,			
Restrictive	Layer (if observed)	:								
Type:	Pavement from o	ld, buried ı	oad							
Depth (i	nches): 8					Hydrid	Soil Present? Ye	es NoX		

No positive indication of hydric soils was observed.

Project/Site:	E	Bluewater SPM		County:	Nueces	3	Sampling	Date: J	anuary 29, 2019
Applicant/Owner:		Lloyd Engine	ering		State:	Texas		oint:	
Investigator(s):	E. Munscher	r and	J. Mitchell	Section, Towr	- nship, Range:			N/A	
Landform (hillslope, terra					oncave, convex	. none):	None		: 0-5
Subregion (LRR or MLRA		None			27.894310				1: North American Datum 1983
Soil Map Unit Name:			clay loam, rarely fl				Classification:		N/A
Are climatic / hydrologic	onditions on				No		explain in Rer		
		No ,or Hydrology			d? Are "Norm	`	•	,	X No
		No ,or Hydrology		ally problemation			explain any a		
CUMMARY OF FU							•		ŕ
SUMMARY OF FI	- פטאועו	Attach Site ma	p snowing s	sampling p	omi locatio	ns, trans	sects, imp	ortant ie	atures, etc.
Hydrophytic Vegetation	Present?	Yes	NoX						
Hydric Soil Present?		Yes	No X		mpled Area				
Wetland Hydrology Pre	sent?	Yes	No X	within a	Wetland?	Υ	es	No	X
Remarks:									
This point was data	minad nat ta	ha within a watland a	lue to the leek of	all three wetler	d oritorio				
This point was dete	mined not to	be within a wetland o	iue to the lack of	all three wettan	u criteria.				
Th		4 - h + + + h		£					
i ne survey area wa	s determined	to be wetter than no	mai at the time of	r survey.					
HYDROLOGY									
Wetland hydrology	Indicators:					Secon	dary Indicator	s (minimum	of two required)
Primary Indicators (ninimum of or	ne is required; check	all that apply)				Surface Soil (•	
Surface Wate	r (A1)	<u> </u>	Aquatic Fauna	a (B13)			Sparsely Veg	etated Conca	ave Surface (B8)
High Water T			_	(B15) (LRR U)			Drainage Patt	terns (B10)	,
Saturation (A		_	_				Moss Trim Lir		
Water Marks	•			ospheres on Liv	ing Roots(C3)		Dry-Season V	, ,	C2)
Sediment De	, ,		_	Reduced Iron (C	- , ,		Crayfish Burro		,
Drift Deposits			_	eduction in Tille	*		-		l Imagery (C9)
Algal Mat or 0	, ,		 Thin Muck Sur 		,		Geomorphic F		
Iron Deposits	, ,		Other (Explain	, ,			Shallow Aquit		
		I Imagery (B7)	_ ` '	,			FAC-Neutral		
Water-Staine							Sphagnum m		R T. U)
	` '	,						` , `	
Field Observations:									
Surface Water Present	Yes	No X	Depth (inche	es): N/A					
Water Table Present?	Yes		_	· ——					
Saturation Present?	Yes		_	, ——	Wetland	Hydrology	Present?	Yes	No X
(includes capillary fringe		···				.,			
Describe Recorded	Data (stream	gauge, monitoring w	ell aerial photos	previous inspe	ctions) if availa	ble:			
Docoribo i tocordod	Jata (otroam	gaago, mormoning w	on, donai priotoo,	provious mope	oliono), ii avalla	DIO.			
I									
Remarks:									
Remarks.									
No positive indication	n of wetland h	nydrology was obser	ved.						
·		, 3,							

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft.)	% cover	Species?	Status	Number of Dominant Species	
1 Name Observed					·	(A)
2			-			,
			·		Total Number of Dominant	
3			· 			(B)
4					Species Across Air Strata.	(0)
5					Demant of Demainant Conscient	
6					Percent of Dominant Species	(A /D)
	500/ 51 1		= Total Cover	•	That Are OBL, FACW, or FAC: 0	(A/B)
O and in an Otractions (Distraction	50% of total cover:		20% of total cover:	0	Prevalence Index Worksheet:	
Sapling Stratum (Plot size:	30 ft.)					
1. None Observed					Total % Cover of: Multiply by:	_
2					OBL species	
3.					FACW species x 2 = 0	_
4					FAC species 0 x 3 = 0	_
5					FACU species 60 x 4 = 240	
6					UPL species x 5 =100	—
			= Total Cover		Column Totals:80 (A)340	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size: 1. None Observed	30 ft.)				Prevalence Index = B/A = 4.25	_
2.					Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
4.			· <u></u>		2 - Dominance Test is >50%	
5.					3 - Prevalence Index is ≤ 3.0 ¹	
6.					Problematic Hydrophytic Vegetation ¹ (Explain)	
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:					be present, unless disturbed or problematic.	
1. Opuntia engelmannii		10	No	UPL	Definitions of Five Vegetation Strata:	
2. Schizachyrium scoparium		30	Yes	FACU	Tree - Woody plants, excluding woody vines,	
Yucca treculeana		10	No	UPL	approximately 20 ft (6m) or more in height and 3 in.	
Cynodon dactylon		30	Yes	FACU	(7.6 cm) or larger in diameter at breast height (DBH).	
5	_				(,g	
6.			-		Sapling - Woody plants, excluding woody vines,	
7.					approximately 20 ft (6 m) or more in height and less	
8.					than 3 in. (7.6 cm) DBH.	
9.			·			
10			-		Shrub - Woody plants, excluding woody vines,	
11			· 		approximately 3 to 20 ft (1 to 6 m) in height.	
* **		80	= Total Cover			
	50% of total cover:		20% of total cover:	16	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size			2070 01 10101 001011		herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2.			· 		3 ft (1 m) in height.	
3.						
4					Woody vine - All woody vines, regardless of height.	
5						
0			= Total Cover		Hydrophytic	
	50% of total cover:		20% of total cover:	0	Vegetation	
	00 % Of total cover.		2070 01 10101 00701.		Present? Yes NoX	
					Present: resNOX	
Remarks: (if observed, list m	ornhological adaptati	ons helow	1			
·						
No positive indication of hydro	ophytic vegetation wa	as observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).	

Depth	Matrix			Redox F	eatures					
(inches)	Color (moist)	%_	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks		
0-16	10YR 5/3	_98_	10YR 5/6	_2_	C	M	Sandy Clay			
						2				
	Concentration, D=Dep		·			Location: P	L=Pore Lining, M=Matri			
•	s Indicators: (Appl	icable to a	•		•	DD C T II)		ematic Hydric Soils ³ :		
Histos	` '				Surface (S8) (L		1 cm Muck (A9)	•		
	Epipedon (A2)				e (S9) (LRR S,	• •	2 cm Muck (A10	, ,		
	Histic (A3) gen Sulfide (A4)			Gleyed M	neral (F1) (LRR etrix (E2)	0)	Reduced Vertic (F18) (outside MLRA 150A,B) Piedmont Floodplain Soils (F19) (LRR P, S, T)			
′ `	ed Layers (A5)			ed Matrix (` ,		Anomalous Bright Loamy Soils (F20)			
	ic Bodies (A6) (LRR	P T II\		Dark Surfa	•		(MLRA 153B)	it Loanly Solis (F20)		
	/lucky Mineral (A7) (L				urface (F7)		Red Parent Material (TF2)			
	Presence (A8) (LRR		· — ·	Depressio	, ,		Very Shallow Dark Surface (TF12)			
	fluck (A9) (LRR P, T)	•		10) (LRR	` '		Other (Explain in Remarks)			
	ed Below Dark Surfa			, ,	-, (F11) (MLRA 1 :	51)		. r.o.na.no,		
	Dark Surface (A12)	()			Masses (F12) (•	³ Indicators of	hydrophytic vegetation and		
	Prairie Redox (A16)	(MLRA 15			F13) (LRR P, T		wetland hydrology must be present,			
—— Sandy	Mucky Mineral (S1)	(LRR O, S) Delta C	chric (F17	7) (MLRA 151)	•	unless disturb	ed or problematic.		
 Sandy	Gleyed Matrix (S4)		Reduce	ed Vertic (F18) (MLRA 15	0A, 150B)				
 Sandy	Redox (S5)		Piedmo	nt Floodp	lain Soils (F19)	(MLRA 149A)				
Strippe	ed Matrix (S6)		Anoma	lous Brigh	t Loamy Soils (F	20) (MLRA 14 9	A, 153C, 153D)			
Dark S	Surface (S7) (LRR P,	S, T, U)								
Restrictive	Layer (if observed)	:								
Type:										
Depth (ii	nches):					Hydric	Soil Present? Yes _	NoX		
Remarks:										

Project/Site:		Bluewater SPM		County:	Nueces	Sampling I	Date: la	nuary 29, 2019
Applicant/Owner:		Lloyd Engi	neerina	Star				DPA016_PEM
Investigator(s):		ther and		Section, Township	-		N/A	
Landform (hillslope, te				Local relief (conc	· · · —	ie): None	Slope (%):	0-5
Subregion (LRR or ML	_			•			,	North American Datum 1983
Soil Map Unit Name:				flooded		NWI Classification:		N/A
Are climatic / hydrolog	ic conditions	•				(if no, explain in Ren		
Are Vegetation	No ,Soil		•			rcumstances" preser	,	X No
Are Vegetation	No ,Soil			rally problematic?		eded, explain any ar	-	
SUMMARY OF I		Attach eito m			t locations	transacts imr	ortant for	aturos oto
SUMINIART OF I		- Allacii Sile iii	iap showing s	samping poin	it iocations,	transects, mi	Jortani ied	itures, etc.
Hydrophytic Vegetati	on Present?	YesX	No					
Hydric Soil Present?		YesX	No	Is the Samp	led Area			
Wetland Hydrology F	resent?	YesX	No	within a We	tland?	YesX	No	
Remarks:								
This point was de	termined to b	e within a wetland du	e to the presence of	of all 3 wetland crite	ria.			
The survey area	was determin	ed to be wetter than r	normal at the time o	of survey.				
HYDROLOGY								
Wetland hydrolo	gy Indicator	's:			:	Secondary Indicators	s (minimum of	two required)
Primary Indicator	s (minimum o	f one is required; che	ck all that apply)		-	Surface Soil C	•	
X Surface W	•	•	X Aquatic Fauna	a (B13)		X Sparsely Vege	` ,	e Surface (B8)
	r Table (A2)	-		(B15) (LRR U)	=	Drainage Patt		o canado (Bo)
Saturation		_	X Hydrogen Sul	, , , .	-	Moss Trim Lin		
Water Mar				cospheres on Living	Roots(C3)	Dry-Season W		.5)
	Deposits (B2)	_		Reduced Iron (C4)	110013(03)	Crayfish Burro	•	,2)
	. , ,	_	_	` ,	- cilc (C6)			Imagany (CO)
Drift Depos	, ,	_		leduction in Tilled S	olis (Cb)	Saturation Vis		imagery (C9)
	or Crust (B4)	_	Thin Muck Su	, ,	-	Geomorphic F		
Iron Depos			Other (Explain	n in Remarks)	_	Shallow Aquit	, ,	
		erial Imagery (B7)			-	X FAC-Neutral 7		
Water-Stai	ned Leaves (I	39)			-	Sphagnum mo	oss (D8) (LRR	(T, U)
Field Observations:								
Surface Water Prese		X No	Depth (inch	es): 3				
Water Table Present			Depth (inch	· ——				
Saturation Present?	Yes			es): >20	Wetland Hydr	ology Present?	Yes X	No
(includes capillary frin	_	No	Depart (meri	CS)	Wettana Hyan	ology i resenti	103 <u>X</u>	- "
Describe Records	ed Data (strea	am gauge, monitoring	well_aerial photos	previous inspectio	ns) if available:			
Bosonia Roserd	ou Bata (otroc	an gaago, montoning	Won, donar priotos,	provided inoposito	no), ii avallabio.			
Remarks:								
A positive indicat	on of wetland	d hydrology was obser	ved (at least one p	rimary indicator).				
A positive indicat	on of wetland	d hydrology was obser	ved (at least two se	econdary indicators).			

Tree Stratum (Plot size: _____30 ft.__)

1. None Observed

Sapling Stratum (Plot size: 30 ft.) 1. None Observed

Shrub Stratum (Plot size: 30 ft.)

Herb Stratum (Plot size: ____ 30 ft. __)

Avicennia germinans

2. Salicornia depressa

3. Spartina alterniflora

Woody Vine Stratum (Plot size: 30 ft.)

1. None Observed

1. None Observed

Absolute

% cover

Dominant

Species?

0 = Total Cover

0 = Total Cover

0 = Total Cover 50% of total cover: ____0 ___ 20% of total cover: ____0

75 = Total Cover

0 = Total Cover 50% of total cover: ____0 ___20% of total cover: ____0

50% of total cover: ___37.5 __ 20% of total cover: ___15

Yes

No___

Yes

OBL

OBL

OBL

50

10___

15___

50% of total cover: ____0 20% of total cover: ___0

50% of total cover: ___ 0 ___ 20% of total cover: ___ 0

Indicator

Status

Sampling Point:	DPA016_PEM			
Dominance Test worksheet:				
Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)		
Total Number of Dominant Species Across All Strata:	2	(B)		

100% (A/B)

Prevalence Index Worksheet:

That Are OBL, FACW, or FAC:

Percent of Dominant Species

Total % C	over of:	M	Multiply by:			
OBL species _	75	_ x 1 = _	75	_		
FACW species _	0	_ x 2 = _	0	_		
FAC species _	0	_ x 3 = _	0	_		
FACU species _	0	x 4 =	0	_		
UPL species _	0	_ x 5 = _	0	_		
Column Totals: _	75	_ (A) _	75	_ (B)		

Prevalence Index = B/A =	1.00

Hydrophytic	Vegetation	Indicators:
-------------	------------	-------------

- 1 Rapid Test for Hydrophytic Vegetation
- X 2 Dominance Test is >50%
- **X** 3 Prevalence Index is $\leq 3.0^1$
- ____ Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Five Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic				
Vegetation				
Present?	Yes	Χ	No	

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	Matrix		2.1/		Features	. 2		Б
(inches)	Color (moist)		Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks
0-16	10Y 4/1	100	None				Clay	
¹ Type: C=Co	oncentration, D=Dep	oletion, RM=Re	educed Matrix, N	/IS=Maske	d Sand Grains.	² Location: Pl	_=Pore Lining, M=Mat	rix.
	Indicators: (Appl							lematic Hydric Soils ³ :
Histoso	I (A1)		Polyva	lue Below	Surface (S8) (L	.RR S, T, U)	1 cm Muck (A9) (LRR O)
	pipedon (A2)				e (S9) (LRR S ,		2 cm Muck (A1	
	listic (A3)				neral (F1) (LRF			(F18) (outside MLRA 150A,B)
	en Sulfide (A4)		X Loamy	-		/		dplain Soils (F19) (LRR P, S, T)
	d Layers (A5)			ed Matrix (, ,			ght Loamy Soils (F20)
	Bodies (A6) (LRR	P T III		Dark Surf	, ,		(MLRA 153B)	gin Louiny Oolio (1 20)
	, , ,	· ·					•	itarial (TE2)
	ucky Mineral (A7) (L resence (A8) (LRR				urface (F7)		Red Parent Ma	
	` , `	•		Depression				Park Surface (TF12)
	uck (A9) (LRR P, T)			10) (LRR	· -	E4\	Other (Explain	iii remarks)
	d Below Dark Surfa	ce (ATT)			(F11) (MLRA 1	=	3 mdiaata== =	f hydrophytic vocatation and
	ark Surface (A12)	(MI DA 4504)		-	Masses (F12)			f hydrophytic vegetation and rology must be present,
	Prairie Redox (A16)	-		`	F13) (LRR P, 1	, u)	,	bed or problematic.
	Mucky Mineral (S1)	(LKK O, S)		•	7) (MLRA 151)			·
	Gleyed Matrix (S4)			,	F18) (MLRA 1 5	· · · · ·		
	Redox (S5)				lain Soils (F19)	-		
	d Matrix (S6)		Anoma	llous Brigh	t Loamy Soils (F20) (MLRA 149	A, 153C, 153D)	
Dark Su	urface (S7) (LRR P,	S, T, U)						
Type: Depth (in						Hydric	Soil Present? Yes	X No
Remarks:								
A nositive in	dication of hydric so	il was observe	4					
A positive in	dication of riguric so	ii was observe	.					

Project/Site:		Bluewater SPM	,	County:	Nueces	Sampling	Date: I:	anuary 29, 2019
Applicant/Owner:		Lloyd Engine		Sta				DPA017_PSS
Investigator(s):	E. Munscl	her and	J. Mitchell	Section, Townshi	p, Range:	<u> </u>	N/A	
Landform (hillslope, te				Local relief (conc	ave, convex, no	ne): None	Slope (%):	0-5
Subregion (LRR or ML	RA):	None		Lat:27.8	91260 Lo	ong: -97.112036	Datum	: North American Datum 1983
Soil Map Unit Name:		ljam o	clay loam, rarely flo	ooded		NWI Classification:		E2USP
Are climatic / hydrolog	c conditions c	on the site typical for thi	•	(Yes / No)		(if no, explain in Rer	,	
Are Vegetation	No,Soil_	,or Hydrology			Are "Normal C	ircumstances" preser	nt? Yes	X No
Are Vegetation	No,Soil_	,or Hydrology	No natura	lly problematic?	(If ne	eeded, explain any ai	nswers in Rer	narks.)
SUMMARY OF F	INDINGS	- Attach site ma	p showing sa	ampling poin	t locations	, transects, imp	ortant fe	atures, etc.
Hydrophytic Vegetation	on Present?	Yes X	No					
Hydric Soil Present?		Yes X	No	Is the Samp	led Area			
Wetland Hydrology P	resent?	Yes X	No	within a We		Yes X	No	
, 3,								
Remarks:								
This point was de	termined to b	e within a wetland due	to the presence of	all 3 wetland crite	ria.			
The survey area	was determin€	ed to be wetter than no	mal at the time of	survey.				
·								
HYDROLOGY								
Wetland hydrolo	gy Indicator	 s:				Secondary Indicator	e (minimum c	of two required)
1	••	f one is required; check	all that apply)			Surface Soil (•	T two required)
X Surface Wa	,		Aquatic Fauna	(B13)		X Sparsely Veg		ve Surface (B8)
	r Table (A2)		Marl Deposits (. ,		Drainage Patt		ve curiace (Bo)
Saturation		<u></u>	Hydrogen Sulfic			Moss Trim Lir		
Water Mark			-	spheres on Living	Roots(C3)	Dry-Season V		C2)
	Deposits (B2)		_	educed Iron (C4)	110013(00)	Crayfish Burro		<i>J</i> Z)
				` ,	coile (C6)		, ,	Imagany (CO)
Drift Depos			_	duction in Tilled S	olis (Cb)			I Imagery (C9)
	or Crust (B4)		_ Thin Muck Surf	, ,		Geomorphic F		
Iron Depos		—	_ Other (Explain	in Remarks)		Shallow Aquit		
		rial Imagery (B7)				X FAC-Neutral		
Water-Stai	ned Leaves (E	39)				Sphagnum m	oss (D8) (LRI	₹ 1, U)
Field Observations:					T			
Surface Water Prese	nt? Yes	X No	Depth (inches	s): 3				
Water Table Present		No X		· ——				
Saturation Present?	Yes	No X	Depth (inche		Wetland Hyd	Irology Present?	Yes X	No
(includes capillary frir	_		_ · `	<i>,</i>				_
Describe Recorde	ed Data (strea	am gauge, monitoring w	ell, aerial photos, p	orevious inspectio	ns), if available:			
Remarks:								
A positive indicati	on of wetland	hydrology was observe	nd (at least one pri	mary indicator)				
A positive indicati	on or welland	nydrology was observe	eu (at least offe pri	mary mulcator).				
A positive indicati	on of wetland	hydrology was observe	ed (at least two sec	condary indicators)			
		,	(,	,-			

		Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:	30 ft)	% cover	Species?	Status	Number of Dominant Species
4 44 64 4		70 00 001		Otatao	That Are OBL, FACW, or FAC: 1 (A)
					That rice GBE, Friend, GFFrie.
2			-		Total Number of Densire and
3					Total Number of Dominant
4					Species Across All Strata: 1 (B)
5					
6			 .		Percent of Dominant Species
			= Total Cover		That Are OBL, FACW, or FAC: (A/B)
	50% of total cover:	0	20% of total cover:	0	
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:
1. None Observed					Total % Cover of: Multiply by:
2			·		OBL species 50 x 1 = 50
3					FACW species 0 x 2 = 0
4					FAC species 0 x 3 = 0
5.					FACU species 0 x 4 = 0
6.					UPL species 0 x 5 = 0
		0	= Total Cover		Column Totals: 50 (A) 50 (B
	50% of total cover:		20% of total cover:	0	
Shrub Stratum (Plot size:			. —		Prevalence Index = B/A = 1.00
		50	Yes	OBL	Trovalonee index Birt
<u>-</u>			163	ODL	Hydrophytic Vegetation Indicators:
2					1 - Rapid Test for Hydrophytic Vegetation
3.					X 2 - Dominance Test is >50%
4					X 3 - Prevalence Index is ≤ 3.0 ¹
5					
6					Problematic Hydrophytic Vegetation ¹ (Explain)
			= Total Cover		1
	50% of total cover:	25	20% of total cover:	10	Indicators of hydric soil and wetland hydrology must
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.
					Definitions of Five Vegetation Strata:
2					Tree - Woody plants, excluding woody vines,
3					approximately 20 ft (6m) or more in height and 3 in.
4					(7.6 cm) or larger in diameter at breast height (DBH).
5					
6					Sapling - Woody plants, excluding woody vines,
7					approximately 20 ft (6 m) or more in height and less
8.					than 3 in. (7.6 cm) DBH.
9.					
10.					Shrub - Woody plants, excluding woody vines,
11.	_				approximately 3 to 20 ft (1 to 6 m) in height.
···		0	= Total Cover		
	50% of total cover:		•	Λ	Herb - All herbaceous (non-woody) plants, including
Woody Vine Stratum (Plot size:			2070 Of total cover.		herbaceous vines, regardless of size, and woody
1. None Observed					plants, except woody vines, less than approximately
					3 ft (1 m) in height.
2					, ,
3.	<u> </u>				Woody vine - All woody vines, regardless of height.
4					violaty vine - All woody vines, regardless of fleight.
5			T:4:10		Hardwards &
			= Total Cover		Hydrophytic
	50% of total cover:	0	20% of total cover:	0	Vegetation
					Present? Yes X No
Remarks: (if observed, list m	orphological adaptat	ions below).		
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	species index	xed as OBL, FACW, or FAC).
	, 0		`		,
A positive indication of hydrop	hytic yeaetation was	observed	(Prevalence Index is	s ≤ 3,00)	
	,g.s.a Wat		,	,-	

Profile Description: (Describe to the depth no Depth Matrix		Redox Features			
Берит — —			Loc ²	Texture	Domarka
	olor (moist)	<u> "Type"</u>	LOC		Remarks
0-16 10Y 4/1 100	None			Clay	
Type: C=Concentration, D=Depletion, RM=Red	uced Matrix. MS	 Masked Sand Grain:	Location: P	L=Pore Lining, M=Matri	X.
Hydric Soils Indicators: (Applicable to all LR					ematic Hydric Soils ³ :
Histosol (A1)		Below Surface (S8)	IRRSTII)	1 cm Muck (A9)	•
Histic Epipedon (A2)		Surface (S9) (LRR §	•	2 cm Muck (A10	
		, , ,	· · · ·		
Black Histic (A3)		ucky Mineral (F1) (LR	R O)		(F18) (outside MLRA 150A,
Hydrogen Sulfide (A4)	_X_Loamy G	eyed Matrix (F2)			plain Soils (F19) (LRR P, S, 1
Stratified Layers (A5)	Depleted	Matrix (F3)		Anomalous Brig	ht Loamy Soils (F20)
Organic Bodies (A6) (LRR P, T, U)	Redox Da	rk Surface (F6)		(MLRA 153B)	
5 cm Mucky Mineral (A7) (LRR P, T, U)	Depleted	Dark Surface (F7)		Red Parent Mat	erial (TF2)
Muck Presence (A8) (LRR U)		pressions (F8)			ark Surface (TF12)
1 cm Muck (A9) (LRR P, T)) (LRR U)		Other (Explain i	, ,
Depleted Below Dark Surface (A11)		Ochric (F11) (MLRA	151)	0 110. (2/4)14	
Thick Dark Surface (A12)		` , `	•	³ Indicators of	hydrophytic vegetation and
		ganese Masses (F12)			ology must be present,
Coast Prairie Redox (A16) (MLRA 150A)		urface (F13) (LRR P,			ped or problematic.
Sandy Mucky Mineral (S1) (LRR O, S)		ric (F17) (MLRA 151			·
Sandy Gleyed Matrix (S4)	Reduced	Vertic (F18) (MLRA 1	50A, 150B)		
Sandy Redox (S5)	Piedmont	Floodplain Soils (F19) (MLRA 149A)		
Stripped Matrix (S6)	Anomalo	is Bright Loamy Soils	(F20) (MLRA 149	9A, 153C, 153D)	
Dark Surface (S7) (LRR P, S, T, U)					
Restrictive Layer (if observed):					
Туре:					
Depth (inches):			Hydrid	Soil Present? Yes	X No
20pm (monoc).			,u		<u> </u>
Remarks:					
ternarks:					
A positive indication of hydric soil was observed.					

Project/Site:	Bluewater SPM	Co	ounty:	Nueces	Sampling [Date: Ja	anuary 29, 2019
Applicant/Owner:	Lloyd Engineer		Stat				DPA018_PEM
Investigator(s): E. Muns	cher and J	I. Mitchell S	ection, Township	o, Range:		N/A	
Landform (hillslope, terrace, etc.):	Beach	L	ocal relief (conca	ave, convex, non	e): None	Slope (%):	0-5
Subregion (LRR or MLRA):	None		_ Lat:27.88	89845 Lon	ng: <u>-97.110758</u>	B Datum	North American Datum 1983
Soil Map Unit Name: Mustan	g fine sand, 0 to 1 percent	slopes, occasiona	ally flooded, frequ	uently ponded	NWI Classification:		E2EM1P
Are climatic / hydrologic conditions	on the site typical for this t		Yes / No)		(if no, explain in Ren	,	
Are Vegetation No ,Soil			-		cumstances" presen		
Are Vegetation No ,Soil	No ,or Hydrology _	No naturally	/ problematic?	(If nee	eded, explain any ar	nswers in Rer	narks.)
SUMMARY OF FINDINGS	S - Attach site map	showing sai	mpling poin	t locations,	transects, imp	ortant fe	atures, etc.
			1				
Hydrophytic Vegetation Present?	Yes X	No					
Hydric Soil Present?	Yes X	No	Is the Samp	led Area			
Wetland Hydrology Present?		No	within a We		Yes X	No	
Wettaria Frydrology Frederit:	163 <u>X</u>		Within a vic	ilaria i	103 <u>X</u>		
Remarks:							
	harastalisa a sasati an dada a ta	41					
This point was determined to	be within a wetland due to	tne presence of a	ii 3 wetiand critei	ia.			
The curvey area was determine	and to be wetter than norm	al at the time of a	IL (O)				
The survey area was determine	ned to be wetter than norm	ai at the time of si	urvey.				
HYDROLOGY							
Wetland hydrology Indicato	rs:			<u>.</u>	Secondary Indicators	s (minimum o	f two required)
Primary Indicators (minimum o	of one is required; check al	l that apply)			Surface Soil C	Cracks (B6)	
X Surface Water (A1)		Aquatic Fauna (E	313)	_	X Sparsely Vege	etated Conca	ve Surface (B8)
High Water Table (A2)		Marl Deposits (B	15) (LRR U)	_	Drainage Patte	erns (B10)	
X Saturation (A3)	<u>X</u>	Hydrogen Sulfide	Odor (C1)	_	Moss Trim Lin	ies (B16)	
X Water Marks (B1)		Oxidized Rhizosp	oheres on Living	Roots(C3)	Dry-Season W	/ater Table (0	C2)
Sediment Deposits (B2		Presence of Red	uced Iron (C4)	_	Crayfish Burro	ows (C8)	
Drift Deposits (B3)		Recent Iron Red	uction in Tilled S	oils (C6)	Saturation Vis	ible on Aerial	Imagery (C9)
Algal Mat or Crust (B4)		Thin Muck Surface	ce (C7)	_	Geomorphic P	Position (D2)	
Iron Deposits (B5)		Other (Explain in	Remarks)	_	Shallow Aquita	ard (D3)	
Inundation Visible on A	erial Imagery (B7)			_	X FAC-Neutral T	Γest (D5)	
Water-Stained Leaves	(B9)			_	Sphagnum mo	oss (D8) (LRF	R T, U)
Field Observations:							
	X No	Depth (inches)					
Water Table Present? Yes	No X	Depth (inches)					
Saturation Present? Yes	X No	Depth (inches)	: <u> </u>	Wetland Hydro	ology Present?	Yes X	No
(includes capillary fringe)				<u></u>			
Describe Recorded Data (stre	eam gauge, monitoring well	, aerial photos, pr	evious inspectior	ıs), if available:			
Remarks:							
A positive indication of wetlan	d hydrology was observed	(at least one prim	any indicator)				
A positive indication of wettan	a flyarology was observed	(at least one prim	ary iridicator).				
A positive indication of wetlan	d hydrology was observed	(at least two seco	andary indicators	١			
A positive indication of wettan	a flyarology was observed	(at least two seco	indary indicators	<i>)</i> -			

Sampling Point:	DPA018_PEM
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		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft)	% cover	Species?	Status	Number of Dominant Species	
1 Name Observed		70 00 701	_ороскос.	Otatao	That Are OBL, FACW, or FAC: 4 (A	
					That the obe, thow, of the	٠,
2					Total Number of Dominant	
3.			·			,,
4					Species Across All Strata: 4 (B)
5						
6			· _ ·		Percent of Dominant Species	<i>-</i> .
			= Total Cover		That Are OBL, FACW, or FAC: (A	√B)
	50% of total cover:	0	20% of total cover:	0	Prevalence Index Worksheet:	
Sapling Stratum (Plot size:	30 ft.)				Prevalence index worksneet:	
1. None Observed					Total % Cover of: Multiply by:	_
2			. <u>——</u>		OBL species 80 x 1 = 80	_
3			. <u> </u>		FACW species15	_
4					FAC species 0 x 3 = 0	_
5					FACU species 0 x 4 = 0	_
6					UPL species 0 x 5 = 0	
		0	= Total Cover		Column Totals: 95 (A) 110	(B)
	50% of total cover:	0	20% of total cover:	0		_
Shrub Stratum (Plot size:			•		Prevalence Index = B/A = 1.16	
1. Avicennia germinans		20	Yes	OBL		_
2.					Hydrophytic Vegetation Indicators:	
3.			·		1 - Rapid Test for Hydrophytic Vegetation	
					X 2 - Dominance Test is >50%	
4					X 3 - Prevalence Index is $\leq 3.0^{1}$	
5			·		Problematic Hydrophytic Vegetation ¹ (Explain)	
6					Problematic Hydrophytic vegetation (Explain)	
	500/ 51 1 1		= Total Cover	4	1	
Hard Objections (District	50% of total cover:	10	20% of total cover:	4	Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)	40		0.01	be present, unless disturbed or problematic.	
Avicennia germinans		10	No	OBL	Definitions of Five Vegetation Strata:	
2. Sesuvium portulacastrum		15	Yes	FACW	Tree - Woody plants, excluding woody vines,	
3. Salicornia depressa		15	Yes	OBL	approximately 20 ft (6m) or more in height and 3 in.	
4. Batis maritima		30	Yes	<u>OBL</u>	(7.6 cm) or larger in diameter at breast height (DBH).	
5. Borrichia frutescens		5	No	OBL		
6			. <u> </u>		Sapling - Woody plants, excluding woody vines,	
7					approximately 20 ft (6 m) or more in height and less	
8					than 3 in. (7.6 cm) DBH.	
9			. <u>———</u>			
10					Shrub - Woody plants, excluding woody vines,	
11			. <u> </u>		approximately 3 to 20 ft (1 to 6 m) in height.	
		75	= Total Cover			
	50% of total cover:	37.5	20% of total cover:	15	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:			•		herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2.					3 ft (1 m) in height.	
3			·			
4.	<u> </u>				Woody vine - All woody vines, regardless of height.	
5			= Total Cover		Hydrophytic	
	EOO/ of total covers		•	0		
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes <u>X</u> No	
Remarks: (if observed, list mo	orphological adaptati	ons below).			
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	species index	xed as OBL, FACW, or FAC).	
			•		·	

Depth	Matrix			Redox F	eatures			
inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-16	10Y 4/1	98	10YR 5/8	2	C		Clay	
						21 11 1		
	oncentration, D=Dep					Location: P	PL=Pore Lining, M=Matr	
-	Indicators: (Appl	icable to a			-			lematic Hydric Soils ³ :
Histosol	, ,				Surface (S8) (L		1 cm Muck (A9	, , ,
	pipedon (A2)				e (S9) (LRR S,		2 cm Muck (A1	
	listic (A3)			-	neral (F1) (LRR	(O)		(F18) (outside MLRA 150A,
	en Sulfide (A4)		X_Loamy	Gleyed M	atrix (F2)			dplain Soils (F19) (LRR P, S,
	d Layers (A5)		X Deplete		•		Anomalous Bri	ght Loamy Soils (F20)
	Bodies (A6) (LRR I			Dark Surfa			(MLRA 153B)	
	ucky Mineral (A7) (L		· — ·		urface (F7)		Red Parent Ma	, ,
Muck P	resence (A8) (LRR	U)	Redox	Depressio	ns (F8)		Very Shallow D	ark Surface (TF12)
1 cm Mı	uck (A9) (LRR P, T))	Marl (F	10) (LRR	U)		Other (Explain	in Remarks)
Deplete	d Below Dark Surfa	ce (A11)	Deplete	ed Ochric	(F11) (MLRA 1	51)		
Thick D	ark Surface (A12)		Iron-Ma	anganese	Masses (F12)	(LRR O, P, T)		f hydrophytic vegetation and
Coast F	Prairie Redox (A16)	(MLRA 150	OA) Umbrio	Surface (F13) (LRR P, T	, U)		ology must be present,
Sandy N	Mucky Mineral (S1)	(LRR O, S)			7) (MLRA 151)		unless distur	bed or problematic.
	Gleyed Matrix (S4)	. ,		•	, (MLRA 15	0A, 150B)		
	Redox (S5)				lain Soils (F19)			
	d Matrix (S6)			•	, ,	-	9A, 153C, 153D)	
	urface (S7) (LRR P ,			ilous Drigit	Loanly Jons (20) (MEIXA 14	3A, 1330, 133D)	
		_						
	Layer (if observed)							
Type:						Hydric	c Soil Present? Yes	X No
						Hydrid	c Soil Present? Yes	X No
Type: Depth (ind						Hydrid	c Soil Present? Yes	X No
Type: Depth (ind						Hydrid	c Soil Present? Yes	X No
Type: Depth (ind	ches):					Hydrid	c Soil Present? Yes	X No
Type: Depth (ind						Hydrid	c Soil Present? Yes	X No
Type: Depth (ind	ches):					Hydrid	c Soil Present? Yes	X No
Type: Depth (ind	ches):					Hydrid	c Soil Present? Yes	X No
Type: Depth (ind	ches):					Hydrid	c Soil Present? Yes	X No
Type: Depth (ind	ches):					Hydrid	c Soil Present? Yes	X No
Type: Depth (ind	ches):					Hydrid	c Soil Present? Yes	X No
Type: Depth (ind	ches):					Hydrid	c Soil Present? Yes	X No
Type: Depth (ind	ches):					Hydrid	c Soil Present? Yes	X No
Type: Depth (ind	ches):					Hydrid	c Soil Present? Yes	X No
Type: Depth (ind	ches):					Hydrid	c Soil Present? Yes	X No
Type: Depth (ind	ches):					Hydrid	c Soil Present? Yes	X No
Type: Depth (ind	ches):					Hydrid	c Soil Present? Yes	X No
Type: Depth (ind	ches):					Hydrid	c Soil Present? Yes	X No
Type: Depth (ind	ches):					Hydrid	c Soil Present? Yes	X No
Type: Depth (ind	ches):					Hydrid	c Soil Present? Yes	X No
Type: Depth (ind	ches):					Hydrid	c Soil Present? Yes	X No
Type: Depth (ind	ches):					Hydrid	c Soil Present? Yes	X No
Type: Depth (ind	ches):					Hydric	c Soil Present? Yes	X No
Type: Depth (ind	ches):					Hydric	c Soil Present? Yes	X No
Type: Depth (ind	ches):					Hydric	c Soil Present? Yes	X No
Type: Depth (ind	ches):					Hydric	c Soil Present? Yes	X No

Project/Site:		Bluewater SPM		County:	Nueces	Sampling	Date: Ja	anuary 29, 2019
Applicant/Owner:		Lloyd Engir	neering	Sta			Point:	
Investigator(s):		er and _		Section, Townshi		· ·	N/A	
Landform (hillslope, ter				Local relief (conc	ave, convex, nor	ne): None	Slope (%):	0-5
Subregion (LRR or ML	RA):	None)	Lat:27.8	390199 Loi	ng: <u>-97.11067</u>	7 Datum:	North American Datum 1983
Soil Map Unit Name:		ljam	clay loam, rarely f	flooded		NWI Classification:		N/A
Are climatic / hydrologi	c conditions on	• • •	•	`		(if no, explain in Re	,	
Are Vegetation	No ,Soil	No ,or Hydrolog				ircumstances" prese		
Are Vegetation	No ,Soil_	No ,or Hydrolog	y No natur	rally problematic?	(If ne	eeded, explain any a	nswers in Ren	narks.)
SUMMARY OF F	INDINGS -	Attach site m	ap showing s	sampling poir	ıt locations,	transects, im	portant fea	atures, etc.
Hydrophytic Vegetation	on Present?	Yes	NoX					
Hydric Soil Present?		Yes			oled Area			
Wetland Hydrology P	resent?	Yes	No X	within a We	tland?	Yes	No	X
Remarks:								
This point was de	termined not to	be within a wetland	due to the lack of	all three wetland c	riteria.			
The survey area v	vas determined	d to be wetter than n	ormal at the time o	of survey.				
HYDROLOGY								
Wetland hydrolo	gy Indicators:	:				Secondary Indicator	rs (minimum o	f two required)
Primary Indicators	(minimum of c	one is required; chec	k all that apply)			Surface Soil	Cracks (B6)	
Surface Wa	ater (A1)		Aquatic Fauna	a (B13)		Sparsely Veg	etated Conca	ve Surface (B8)
High Water	Table (A2)		Marl Deposits	(B15) (LRR U)		Drainage Pat	terns (B10)	
Saturation	(A3)	_	Hydrogen Sulf	fide Odor (C1)		Moss Trim Li	nes (B16)	
Water Mark	(s (B1)		Oxidized Rhiz	ospheres on Living	Roots(C3)	Dry-Season \	Water Table (C	C2)
Sediment D	Deposits (B2)		Presence of R	Reduced Iron (C4)		Crayfish Burr	ows (C8)	
Drift Depos	its (B3)		Recent Iron R	eduction in Tilled S	soils (C6)	Saturation Vi	sible on Aerial	Imagery (C9)
Algal Mat o	r Crust (B4)		Thin Muck Su	ırface (C7)		Geomorphic	Position (D2)	
Iron Depos	ts (B5)	_	— Other (Explair	n in Remarks)		Shallow Aqui	tard (D3)	
Inundation	Visible on Aeria	al Imagery (B7)				FAC-Neutral	Test (D5)	
	ned Leaves (B9				•	Sphagnum m	oss (D8) (LRF	₹ T, U)
Field Observations:								
Surface Water Prese		NoX		<i>'</i> ———				
Water Table Present	? Yes	NoX	Depth (inche	es): <u>>20</u>				
Saturation Present? (includes capillary frin	Yes	NoX	Depth (inche	es): <u>>20</u>	Wetland Hydr	rology Present?	Yes	NoX
·	<u> </u>	a acusa manitarina	vall parial photos	province increation) if available			
Describe Records	d Data (stream	n gauge, monitoring	weii, aeriai priotos,	previous inspection	ns), ii available:			
Remarks:								
No positive indica	tion of wetland	hydrology was obse	rved.					

Sampling Point:	DPA019 U
Camping Form.	DI A013_0

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft)	% cover	Species?	Status	Number of Dominant Species	
1 Name Observed		70 00 001	_ороскос.	Otatuo	•	(A)
					That the obe, i thow, of the	(, (,
2					Total Number of Dominant	
3						/D)
4					Species Across All Strata: 3	(B)
5					Book of Book on the	
6			T-1-1-0		Percent of Dominant Species	(A (D)
			= Total Cover		That Are OBL, FACW, or FAC:	(A/B)
	50% of total cover:	0	20% of total cover:	0	Prevalence Index Worksheet:	
Sapling Stratum (Plot size:	30 ft.)					
1. None Observed					Total % Cover of: Multiply by:	
2					OBL species 0 x 1 = 0	
3					FACW species 0	
4					FAC species 0 x 3 = 0	
5					FACU species 70 x 4 = 280	
6					UPL species 30 x 5 = 150	
			= Total Cover		Column Totals: (A) 430	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = 4.30	
1. Prosopis glandulosa		10	Yes	UPL		
2					Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
4.					2 - Dominance Test is >50%	
5.	<u> </u>				3 - Prevalence Index is ≤ 3.0 ¹	
6.					Problematic Hydrophytic Vegetation ¹ (Explain)	
		10	= Total Cover			
	50% of total cover:		20% of total cover:	2	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:			. —		be present, unless disturbed or problematic.	
Cynodon dactylon	/	30	Yes	FACU	Definitions of Five Vegetation Strata:	
Lysimachia arvensis		15	No	FACU	Tree - Woody plants, excluding woody vines,	
Nassella leucotricha		20	Yes	UPL	approximately 20 ft (6m) or more in height and 3 in.	
4. Melilotus indicus		15	No	FACU	(7.6 cm) or larger in diameter at breast height (DBH).	
		10	No	FACU	(7.0 cm) of larger in diameter at breast height (DBH).	
5. <u>Sonchus asper</u>	-			FACU	Sapling - Woody plants, excluding woody vines,	
6					approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8					(· · · · · · · · · · · · · · · ·	
9					Shrub - Woody plants, excluding woody vines,	
10					approximately 3 to 20 ft (1 to 6 m) in height.	
11					approximately a to 20 ft (1 to a m) in meight	
	500/ 51 1 1		= Total Cover	40	Herb - All herbaceous (non-woody) plants, including	
	50% of total cover:	45	20% of total cover:	18	herbaceous vines, regardless of size, and woody	
Woody Vine Stratum (Plot size:	30 ft)				plants, except woody vines, less than approximately	
1. None Observed					3 ft (1 m) in height.	
2					3 it (1 iii) iii neigiit.	
3					Manager All was deviced as a second as a finish.	
4					Woody vine - All woody vines, regardless of height.	
5						
			= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes NoX	
Remarks: (if observed, list me	orphological adaptati	ons below).			
No positive indication of hydro	phytic vegetation wa	as observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).	
,	1 7 3		(,	

Depth	Matrix		-	Redox F	eatures				
(inches)	Color (moist)	%_	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks	
0-16	0-16 10YR 6/4 98			_2_	C	M	Loamy Sand		
Type: C=C	Concentration, D=Dep	oletion. RM	I=Reduced Matrix. M	—— IS=Maske	d Sand Grains.	² Location: P	 L=Pore Lining, M=Matrix	<u>.</u>	
	s Indicators: (Appl		·			200410111		ematic Hydric Soils ³ :	
Histoso	ol (A1)		Polyval	ue Below	Surface (S8) (LI	RR S, T, U)	1 cm Muck (A9)	(LRR O)	
Histic I	Epipedon (A2)		Thin Da	ark Surface	e (S9) (LRR S ,	Γ, U)	2 cm Muck (A10)) (LRR S)	
Black I	Histic (A3)		Loamy	Mucky Mir	neral (F1) (LRR	O)	Reduced Vertic ((F18) (outside MLRA 150A,B	
Hydrog	gen Sulfide (A4)		Loamy	Gleyed Ma	atrix (F2)		Piedmont Floodplain Soils (F19) (LRR P, S, T)		
Stratifi	ed Layers (A5)		Deplete	ed Matrix (F3)		Anomalous Bright Loamy Soils (F20)		
Organi	ic Bodies (A6) (LRR	P, T, U)	Redox	Dark Surfa	ace (F6)		(MLRA 153B)		
5 cm N	/lucky Mineral (A7) (L	.RR P, T, I	J) Deplete	ed Dark Su	ırface (F7)		Red Parent Mate	erial (TF2)	
	Presence (A8) (LRR	•		Depressio	` ,			rk Surface (TF12)	
	/luck (A9) (LRR P, T)			10) (LRR	•		Other (Explain in	Remarks)	
	ed Below Dark Surfa	ce (A11)		`	F11) (MLRA 15	•	3, ,, ,		
	Dark Surface (A12)			•	Masses (F12) (I			hydrophytic vegetation and	
<u> </u>	Prairie Redox (A16)				F13) (LRR P, T,	U)	wetland hydrology must be present, unless disturbed or problematic.		
	Mucky Mineral (S1)	(LKK U, S		•	') (MLRA 151) =19) (MLBA 150	A 450D)			
	Gleyed Matrix (S4) Redox (S5)			,	F18) (MLRA 150 ain Soils (F19) (•			
	ed Matrix (S6)				. ,		9A, 153C, 153D)		
	Surface (S7) (LRR P,	S. T. U)		loud Brigin	Learny Cono (i	20) (III 2 101114	71, 1000, 1002,		
	,,,,,,	-, , -,							
Restrictive	Layer (if observed)	:							
Type:									
Depth (ir	nches):					Hydrid	Soil Present? Yes _	NoX	
Bamarka									
Remarks:									
No nositivo	indication of hydric s	oilo waa al	aconvod						

Project/Site:	Bli	uewater SPM		County:	Nueces		Sampling Da	te: Ja	nuary 29, 2019
		Lloyd Engineer		Stat		Texas			PA020_PEM
Investigator(s):	E. Munscher		. Mitchell	Section, Township	ວ, Range:		-	N/A	
Landform (hillslope, ter	race, etc.):			Local relief (conca	ave, convex, r	none):	None	Slope (%):	0-5
Subregion (LRR or MLI						· · · · · · · · · · · · · · · · · · ·			North American Datum 1983
Soil Map Unit Name:		ljam cla	y loam, rarely fl				ssification:		N/A
Are climatic / hydrologic	·						plain in Rema	rks.)	
Are Vegetation	No ,Soil N	or Hydrology	No signifi	cantly disturbed?	Are "Normal	Circumstan	ices" present?	Yes	X No
Are Vegetation	No ,Soil N	or Hydrology	No natura	ally problematic?	(If	needed, ex	plain any ansv	vers in Rem	arks.)
SUMMARY OF F	INDINGS - A	∆ttach site man	ehowina s	ampling poin	t location	e trance	acts imno	rtant fos	ituras atc
		Attaon Site map	3110 Willig 3	umpinig poin		o, transc	oto, impo	- tant icc	
Hydrophytic Vegetation	n Present?		No						
Hydric Soil Present?			No	Is the Samp	led Area				
Wetland Hydrology Pi	esent?	YesX	No	within a We	tland?	Yes	<u> </u>	No	
Remarks:									
This point was de	termined to be wi	thin a wetland due to	the presence of	f all 3 wetland crite	ria.				
·			•						
The survey area v	vas determined to	be wetter than norm	al at the time of	survey.					
				•					
113/22201									
HYDROLOGY									
Wetland hydrolo							-		two required)
		e is required; check al	,	(5.45)			ırface Soil Cra		
X Surface Wa		<u>X</u>	Aquatic Fauna	, ,					e Surface (B8)
High Water	, ,			(B15) (LRR U)			ainage Patteri		
Saturation (<u> X</u>	Hydrogen Sulfi		D (00)		oss Trim Lines		0)
Water Mark				ospheres on Living	Roots(C3)		y-Season Wa	•	2)
	eposits (B2)			educed Iron (C4)	" (00)		ayfish Burrow		(00)
Drift Depos	, ,			eduction in Tilled S	oils (C6)		turation Visibl		magery (C9)
Algal Mat o			Thin Muck Sur	, ,			eomorphic Pos	, ,	
Iron Deposi		(57)	Other (Explain	in Remarks)			nallow Aquitaro		
	Visible on Aerial I	imagery (B7)					AC-Neutral Te		- III
water-Stair	ned Leaves (B9)					Sp	hagnum moss	s (D8) (LRR	1, 0)
Field Observations:					Ī				
Surface Water Preser	at2 Vas '	X No	Depth (inche	es): 3					
Water Table Present?			Depth (inche	<i>'</i>					
Saturation Present?		No X	Depth (inche		Wetland H	vdrology Pr	resent? Ye	se Y	No
(includes capillary frin	ge)	NO	Deptil (illelie	.5)	Wettand m	yarology i i	esent: re	.s <u> </u>	_ 140
Describe Recorde	d Data (stream d	auge, monitoring well	aerial nhotos	nrevious inspection	ns) if availahl	٥.			
Describe recorde	d Data (Stream 9	auge, monitoring wen	, acriai priotos,	previous inspection	is), ii avallabi	c.			
Remarks:									
A positive indication	on of wetland hyd	drology was observed	(at least one pr	imary indicator).					
	-								
A positive indication	on of wetland hyd	drology was observed	(at least two se	condary indicators).				
	-		•						

Name Observed			Absolute	Dominant	Indicator	Dominance Test worksheet:	
Name Observed	Tree Stratum (Plot size:	30 ft)				Number of Dominant Species	
2 Tolal Number of Dominant Species Across All Strata:	1 Nama Observad		70 00 001	<u>ороског.</u>	Otatao	·	١
Total Number of Dominant Species						That Ale Obe, I ACW, OI I Ac.	,
Species Across All Stratus Species Across							
Percent of Dominant Species							
Percent of Daminant Species That Arc Oak, EA/OW, or Face Total Cover Sapking Stratum (Plot size: 30 ft.)						Species Across All Strata:5 (B))
That Are OBL, FACW, or FAC: 100% (A/B)	5						
Saping Stratum (Plot size: 30 ft.)	6					Percent of Dominant Species	
Name			0	= Total Cover		That Are OBL, FACW, or FAC: (A/	/B)
Total % Cover of: Multiply by:		50% of total cover:	0	20% of total cover:	0		
None Observed	Sapling Stratum (Plot size:	30 ft.)		•		Prevalence Index Worksheet:	
2. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3.	· - · · —					Total % Cover of: Multiply by:	
\$							-
## FAC Species 0 x 34 = 0 ## FAC Species 0 x 44 = 0 ## COLUMN Totals:	2					· — — — — — — — — — — — — — — — — — — —	-
FACU species 0							-
Column Totals:							-
Column Totals 70							-
Shrub Stratum (Plot size: 30 ft.)	6					UPL species 0 x 5 = 0	_
Shrub Stratum			0	= Total Cover		Column Totals: (A) 70	_ (B)
1. Avicennia germinans		50% of total cover:	0	20% of total cover:	0		
2	Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = 1.00	_
2. Hydrophytic Vegetation Indicators:	1. Avicennia germinans		20	Yes	OBL		
3.		•				Hydrophytic Vegetation Indicators:	
X 2 - Dominance Test is >50% X 3 - Prevalence Index is \$ 3.0 \cdot					_		
5.							
Problematic Hydrophytic Vegetation (Explain)							
Formula Form							
Some of total cover: 10 20% of total cover: 4 1 1 1 1 1 1 1 1 1	0					Problematic Hydrophytic Vegetation (Explain)	
Depresent, unless disturbed or problematic.						1	
1. Avicennia germinans			10	20% of total cover:	4		
2. Borrichia frutescens 3. Batis maritima 1.5 Yes OBL 4. Salicornia depressa 1.0 Yes OBL 5. Ge. 6. Sapling - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) OBL Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, excluding woody vines, approximately 3 ft (1 m) in height. Woody Vine Stratum (Plot size: 30 ft.) 1. None Observed 3. Get woody vines, less than approximately 3 ft (1 m) in height. Woody vine - All woody vines, regardless of height. Woody vine - All woody vines, regardless of height. Woody vine - All woody vines, regardless of height. Vegetation Present? Yes X No	•	30_ft)				·	
3. Batis maritima 4. Salicornia depressa 10 Yes OBL 5. 6.	1. Avicennia germinans		10	Yes	OBL	Definitions of Five Vegetation Strata:	
4. Salicornia depressa 10 Yes OBL (7.6 cm) or larger in diameter at breast height (DBH). 5. 6.	2. Borrichia frutescens		15	Yes	OBL	Tree - Woody plants, excluding woody vines,	
Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. None Observed Noody Vine Stratum (Plot size: 30 ft.) None Observed Therb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine - All woody vines, regardless of height. Woody vine - All woody vines, regardless of height. Hydrophytic Vegetation Present? Yes X No	3. Batis maritima		15	Yes	OBL	approximately 20 ft (6m) or more in height and 3 in.	
Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Sapling - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine - All woody vines, regardless of height. Woody vine - All woody vines, regardless of height. Hydrophytic Vegetation Present? Yes X No	4. Salicornia depressa		10	Yes	OBL	(7.6 cm) or larger in diameter at breast height (DBH).	
Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. None Observed 2.	5						
7						Sapling - Woody plants, excluding woody vines,	
8						approximately 20 ft (6 m) or more in height and less	
9						than 3 in. (7.6 cm) DBH.	
Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Woody Vine Stratum (Plot size: 30 ft.)							
approximately 3 to 20 ft (1 to 6 m) in height. So						Shrub - Woody plants, excluding woody vines,	
Sow of total cover: 25 20% of total cover: 10	11						
Solid cover: 25 20% of total cover: 10 Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine - All woody vines, regardless of height.		-				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Moody Vine Stratum (Plot size: 30 ft.) 1. None Observed 2.					40	Harb All harbaceous (non woody) plants, including	
1. None Observed 2			25	20% of total cover:	10	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
2	· ·	30 ft.)				<u> </u>	
3	1. None Observed						
4	2					3 π (1 m) in neight.	
5	3						
O = Total Cover Hydrophytic Vegetation Present? Yes X No No No No No No No	4					Woody vine - All woody vines, regardless of height.	
So% of total cover: 0 20% of total cover: 0 Vegetation Present? Yes X No Remarks: (if observed, list morphological adaptations below).	5						
Present? Yes X No Remarks: (if observed, list morphological adaptations below).	·	_	0	= Total Cover		Hydrophytic	
Present? Yes X No Remarks: (if observed, list morphological adaptations below).		50% of total cover:	0	20% of total cover:	0	Vegetation	
Remarks: (if observed, list morphological adaptations below).						_	
						100 <u>X</u> 100	
	Pamarke: (if absorved list m	orphological adaptati	one holow	١			
A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).	ist m	orpriological adaptati	OLIS DEIOW).			
	A positive indication of hydrop	ohytic vegetation was	observed	(>50% of dominant	species index	ked as OBL, FACW, or FAC).	

epth (Matrix				Features			
nches)	Color (moist)	%	Color (moist)	%	Type¹	Loc ²	Texture	Remarks
0-16	5Y 5/1	<u>95</u>	10YR 6/8	5	C	M	Sandy Clay	
Type: C=Co	oncentration, D=Dep	 oletion, RM=	Reduced Matrix, N	 //S=Maske	d Sand Grains.	² Location: P	L=Pore Lining, M=Matrix	
lydric Soils	Indicators: (Appl	icable to a	I LRRs, unless of	herwise r	oted.)		Indicators for Proble	ematic Hydric Soils ³ :
Histoso	I (A1)		Polyva	lue Below	Surface (S8) (L	RR S, T, U)	1 cm Muck (A9)	(LRR O)
Histic E	pipedon (A2)		Thin D	ark Surfac	e (S9) (LRR S,	T, U)	2 cm Muck (A10)	(LRR S)
Black H	listic (A3)		Loamy	Mucky Mi	neral (F1) (LRR	O)	Reduced Vertic (F18) (outside MLRA 150A,E
Hydroge	en Sulfide (A4)		Loamy	Gleyed M	atrix (F2)		Piedmont Floodp	lain Soils (F19) (LRR P, S, T
Stratifie	d Layers (A5)		Deplet	ed Matrix ((F3)		Anomalous Brigh	t Loamy Soils (F20)
Organic	Bodies (A6) (LRR	P, T, U)	Redox	Dark Surf	ace (F6)		(MLRA 153B)	
5 cm M	ucky Mineral (A7) (L	RR P, T, U) Deplet	ed Dark S	urface (F7)		Red Parent Mate	rial (TF2)
Muck P	resence (A8) (LRR	U)	Redox	Depression	ons (F8)		Very Shallow Da	rk Surface (TF12)
1 cm M	uck (A9) (LRR P, T))		10) (LRR	-		Other (Explain in	Remarks)
Deplete	d Below Dark Surfa	ce (A11)	Deplet	ed Ochric	(F11) (MLRA 1 5	31)	2	
	ark Surface (A12)			•	Masses (F12) (nydrophytic vegetation and
Coast F	Prairie Redox (A16)	(MLRA 150	A) Umbrid	Surface (F13) (LRR P, T ,	U)	•	logy must be present, ed or problematic.
Sandy I	Mucky Mineral (S1)	(LRR O, S)	Delta (Ochric (F1	7) (MLRA 151)		dinose distalls	od or problomatio.
	Gleyed Matrix (S4)		Reduc	ed Vertic (F18) (MLRA 15 0	DA, 150B)		
X Sandy F	Redox (S5)		Piedm	ont Floodp	lain Soils (F19)	(MLRA 149A)		
	d Matrix (S6)		Anoma	lous Brigh	t Loamy Soils (F	(20) (MLRA 14)	9A, 153C, 153D)	
Dark Su	urface (S7) (LRR P ,	S, T, U)						
	Layer (if observed)	:						
Type:							0 II D	v 11
Depth (in	ches):					Hydrid	c Soil Present? Yes _	X No
Remarks:								
positive inc	dication of hydric so	il was obser	ved.					

Project/Site:	Bli	uewater SPM	C	ounty:	Nueces	Sampling	Date: Ja	nuary 29, 201	10
Applicant/Owner:		Lloyd Enginee		Stat			Point:		<u> </u>
Investigator(s):				Section, Township	-	- Campio i	N/A	<u> </u>	
Landform (hillslope, ter					· · · —	ne). None	Slope (%):	0-5	
Subregion (LRR or ML	-			,		ng: <u>-97.12181</u>	- ' ' '		
Soil Map Unit Name:			ay loam, rarely floo			NWI Classification:		N/A	ratum 1505
Are climatic / hydrologi				(Yes / No)		(if no, explain in Re		14// (
Are Vegetation		es,or Hydrology				• •	,	X No	
Are Vegetation		lo ,or Hydrology		y problematic?		eeded, explain any a			
_				•	·	•		,	_
SUMMARY OF F	·INDINGS - A	ttach site map	snowing sai	mpling poin	t locations,	, transects, im	portant rea	itures, etc	<i>;</i> .
Hydrophytic Vegetation	on Present?	Yes	NoX						
Hydric Soil Present?		YesX	No	Is the Samp	led Area				
Wetland Hydrology P	resent?	Yes	NoX	within a Wet	tland?	Yes	No	X	
Remarks:									
This point was de	termined not to be	e within a wetland du	ie to the lack of hy	drophytic vegetat	tion and wetland	d hydrology.			
The survey area v	was determined to	be wetter than norn	nal at the time of s	urvey.					
HYDROLOGY									
Wetland hydrolo	gy Indicators:					Secondary Indicator	rs (minimum of	two required)
Primary Indicators	s (minimum of one	e is required; check a	all that apply)			Surface Soil (
Surface Wa	•		Aquatic Fauna (E	B13)			etated Concav	e Surface (B8	3)
High Water	` ,		Marl Deposits (B	•		Drainage Pat		(-,
Saturation	, ,		. Hydrogen Sulfide			Moss Trim Li			
Water Mark		-	Oxidized Rhizos	, ,	Roots(C3)		Nater Table (C	:2)	
	Deposits (B2)		Presence of Red	-	110010(00)	Crayfish Burr	,	-/	
Drift Depos			Recent Iron Red	` ,	oile (C6)		sible on Aerial	Imageny (CQ)	
	or Crust (B4)		Thin Muck Surfa		0113 (00)	Geomorphic		inagery (00)	
	, ,		Other (Explain in	, ,					
Iron Depos			. Other (Explain in	i Remarks)		Shallow Aqui			
	Visible on Aerial I ned Leaves (B9)	magery (b7)				FAC-Neutral	rest (D5) loss (D8) (LRR	. T IIV	
Water-Stall	led Leaves (B9)					Spriagrium in	1055 (D0) (LKK	. 1, 0)	
Field Observations:									
Surface Water Prese	nt? Yes	No X	Depth (inches)): N/A					
Water Table Present		No X	Depth (inches)						
Saturation Present?	Yes	No X	Depth (inches)		Wetland Hydi	rology Present?	Yes	No X	
(includes capillary frin			,	<u> </u>			_		
Describe Recorde	ed Data (stream g	auge, monitoring we	ll, aerial photos, pr	evious inspection	ns), if available:				
Remarks:									
No positive indica	ition of wetland hy	drology was observe	ad						
No positive indica	lion of welland hy	urology was observe	eu.						

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft)	% cover	Species?	Status	Number of Dominant Species	
1 Name Observed		70 00 001	Орескоз:	Otatas	·	A)
			-		That Ale OBE, I AGW, OI I AG.	^'
2					Total Name to a Constitute	
3					Total Number of Dominant	ь,
4					Species Across All Strata: 4	B)
5						
6					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC: (A	A/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1. None Observed					Total % Cover of: Multiply by:	
2					OBL species 0 x 1 = 0	
3.	<u> </u>				FACW species 10	_
4.					FAC species 10 x 3 = 30	_
5.					FACU species 10 x 4 = 40	
6.					UPL species 30 x 5 = 150	_
o			= Total Cover		Column Totals: 60 (A) 240	— _(B)
	50% of total cover:		20% of total cover:	0	Goldmin Totals (7)	一 ⁽⁵⁾
Shrub Stratum (Dlat size:			20% of total cover.		Prevalence Index = B/A = 4.00	
Shrub Stratum (Plot size:	·				Prevalence index – B/A – 4.00	-
2					Hydrophytic Vegetation Indicators:	
3					1 - Rapid Test for Hydrophytic Vegetation	
4					2 - Dominance Test is >50%	
5					3 - Prevalence Index is ≤ 3.0 ¹	
6					Problematic Hydrophytic Vegetation ¹ (Explain)	
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
Nassella leucotricha	 -	30	Yes	UPL	Definitions of Five Vegetation Strata:	
2. Calyptocarpus vialis		10	Yes	FAC	Tree - Woody plants, excluding woody vines,	
3. Sonchus asper		10	Yes	FACU	approximately 20 ft (6m) or more in height and 3 in.	
4. Tamarix ramosissima		10	Yes	FACW	(7.6 cm) or larger in diameter at breast height (DBH).	
			163	TAOW	(7.0 diff) of larger in diameter at breast neight (DBH).	
5					Sapling - Woody plants, excluding woody vines,	
6					approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8					than 3 in. (7.0 cm) bbn.	
9					Charle Woody plants avaluding woody vines	
10					Shrub - Woody plants, excluding woody vines,	
11					approximately 3 to 20 ft (1 to 6 m) in height.	
		60	= Total Cover			
	50% of total cover:	30	20% of total cover:	12	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:	30 ft.)				herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2					3 ft (1 m) in height.	
3						
4.			 _		Woody vine - All woody vines, regardless of height.	
5.						j
			= Total Cover		Hydrophytic	
	50% of total cover:		20% of total cover:	0	Vegetation	
	0070 01 10101 007011		2070 01 10101 001011		Present? Yes No X	
					Tresent: TesNOX	
Demarks, (if shear, ad list me	embalagical adaptat	iono holowi	\			
Remarks: (if observed, list mo	orpriological adaptati	ions below).			
No positive indication of hydro	phytic vegetation wa	as observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).	

Depth	Matrix			Redox F	eatures			
inches)	Color (moist)	<u>%</u>	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks
0-16	10YR 6/2	98	10YR 6/8	2	C		Loamy Sand	Disturbed soils
		<u> </u>						
					<u></u>			
Type: C=Co	ncentration, D=Dep	letion RM=	Reduced Matrix I	 //S=Maske	d Sand Grains	² Location: P	 L=Pore Lining, M=N	
	Indicators: (Appli					2004		roblematic Hydric Soils ³ :
Histosol					Surface (S8) (L	RRSTU)		(A9) (LRR O)
	pipedon (A2)				e (S9) (LRR S ,			(A10) (LRR S)
Black His	. , ,				neral (F1) (LRR			ertic (F18) (outside MLRA 150A ,I
	n Sulfide (A4)			Gleyed Ma		-,		oodplain Soils (F19) (LRR P, S, 1
	l Layers (A5)			ed Matrix (, ,			Bright Loamy Soils (F20)
	Bodies (A6) (LRR F	D T III		Dark Surfa	*		(MLRA 153	
	icky Mineral (A7) (L						· ·	Material (TF2)
	esence (A8) (LRR I			Depressio	ırface (F7) ns (F8)			w Dark Surface (TF12)
	ick (A9) (LRR P, T)			Depressio (LRR (LRR				ain in Remarks)
	d Below Dark Surfac				(F11) (MLRA 1	; 4)	Otilei (Expi	ani ni Nomarko)
		Le (ATT)				-	³ Indicator	s of hydrophytic vegetation and
	ark Surface (A12) rairie Redox (A16) (MI DA 1507		-	Masses (F12) (F13) (LRR P, T			ydrology must be present,
	lucky Mineral (S1) (') (MLRA 151)	, 0)		sturbed or problematic.
	, , ,	LKK 0, 3)				0A 4E0B)		
	Sleyed Matrix (S4)				F18) (MLRA 15 Ioin Soile (F10)			
X Sandy R	, ,				ain Soils (F19)	-	0A 1E2C 1E2D)	
	Matrix (S6)	C T II)	Anoma	alous Brigit	Loanly Solls (F	-20) (IVILKA 14	9A, 153C, 153D)	
Dark Sui	rface (S7) (LRR P,	3, 1, 0)						
	ayer (if observed):							
Restrictive La Type: Depth (inc						Hydri	c Soil Present? Y	es <u>X</u> No
Type: Depth (inc						Hydri	c Soil Present? Y	es <u>X</u> No
Type:						Hydri	c Soil Present? Y	es <u>X</u> No
Type: Depth (inc	hes):					Hydri	c Soil Present? Y	es <u>X</u> No
Type: Depth (inc						Hydri	c Soil Present? Y	es <u>X</u> No
Type: Depth (inc	hes):					Hydri	c Soil Present? Y	es <u>X</u> No
Type: Depth (inc	hes):	l was observ				Hydri	c Soil Present? Y	es <u>X</u> No
Type: Depth (inc	hes):	l was observ				Hydri	c Soil Present? Y	es <u>X</u> No
Type: Depth (inc	hes):	l was observ				Hydri	c Soil Present? Y	es <u>X</u> No
Type: Depth (inc	hes):	l was observ				Hydri	c Soil Present? Y	es X No
Type: Depth (inc	hes):	l was observ				Hydri	c Soil Present? Y	es <u>X</u> No
Type: Depth (inc	hes):	l was observ				Hydri	c Soil Present? Y	es <u>X</u> No
Type: Depth (inc	hes):	l was observ				Hydri	c Soil Present? Y	es <u>X</u> No
Type: Depth (inc	hes):	l was observ				Hydri	c Soil Present? Y	es X No
Type: Depth (inc	hes):	l was observ				Hydri	c Soil Present? Y	es X No
Type: Depth (inc	hes):	l was observ				Hydri	c Soil Present? Y	es <u>X</u> No
Type: Depth (inc	hes):	l was observ				Hydri	c Soil Present? Y	es <u>X</u> No
Type: Depth (inc	hes):	l was observ				Hydri	c Soil Present? Y	es <u>X</u> No
Type: Depth (inc	hes):	l was observ				Hydri	c Soil Present? Y	es <u>X</u> No
Type: Depth (inc	hes):	l was observ				Hydri	c Soil Present? Y	es X No
Type: Depth (inc	hes):	l was observ				Hydri	c Soil Present? Y	es <u>X</u> No
Type: Depth (inc	hes):	l was observ				Hydri	c Soil Present? Y	es X No
Type: Depth (inc	hes):	l was observ				Hydri	c Soil Present? Y	es X No
Type: Depth (inc	hes):	l was observ				Hydri	c Soil Present? Y	es X No
Type: Depth (inc	hes):	l was observ				Hydri	c Soil Present? Y	es X No
Type: Depth (inc	hes):	l was observ				Hydri	c Soil Present? Y	es X No
Type: Depth (inc	hes):	l was observ				Hydri	c Soil Present? Y	es X No
Type: Depth (inc	hes):	l was observ				Hydri	c Soil Present? Y	esX No

Project/Site:		Bluewater SPN	M	Cou	unty:	Nueces		Sampling D	າate∙ .la	nuary 29, 2019	
Applicant/Owner:		Lloyd			State					DPA022_PEM	—
Investigator(s):					ction, Township		10/40	Cumpio	N/A	71 71022_1 2	_
Landform (hillslope, to			Beach		cal relief (conca	· · · —	one):	None	Slope (%):	0-5	_
Subregion (LRR or M	_		None						,	North American Datum 1	983
Soil Map Unit Name:				loam, rarely floode	-					N/A	/C.
Are climatic / hydrolo					'es / No)		(if no, exp	-			_
Are Vegetation _	No ,Soil_	No ,or Hy					_ ` .		,	X No	
Are Vegetation _	No Soil			No naturally p					swers in Rem		_
SUMMARY OF	FINDINGS	- Attach sit	e map s	 howing sam	ınlina point	locations	s transe	cts. imp	ortant fea	atures, etc.	
					.ba 6		J, 6141.00	O.O.,,.			_
Charles and the Manager	" ·· D	V:- V	N								
Hydrophytic Vegeta		Yes X		0	la tha Campl	4 0					
Hydric Soil Present?		Yes X		o	Is the Sampl		Voc	v	No		
Wetland Hydrology	Přesent?	Yes		0	within a Wet	lanu r	165	X	NO		
Remarks:											П
This point was o	letermined to h	e within a wetlar	nd due to th	e presence of all	3 wetland criter	ia					
Triis point was c	icterrillined to be	c within a wettar	ia ade to til	e presence of all	o welland onter	u.					
The survey area	a was determine	ed to be wetter t	han normal	at the time of sur	vey.						
					,						
HYDROLOGY											
Wetland hydro	logy Indicator	 s:					Secondar	v Indicators	(minimum of	f two required)	
Primary Indicato			· check all ti	hat annly)				face Soil C	`	two required)	
X Surface V	•	Olie is required		Nquatic Fauna (B1	13)					ve Surface (B8)	
	er Table (A2)			Marl Deposits (B15	•			aisely vege ainage Patte		e ouriace (Do)	
Saturation				lydrogen Sulfide (ss Trim Lin			
Water Ma				Dxidized Rhizosph	, ,	Poots(C3)			es (B10) /ater Table (C	رد,	
	Deposits (B2)			Presence of Reduc	ū	10013(00)		yfish Burro	•	2)	
Drift Depo				Recent Iron Reduc	` ,	sile (CA)		-	, ,	Imagery (C9)	
	or Crust (B4)			hin Muck Surface)iis (OO)			osition (D2)	illagery (Oc)	
Iron Depo	, ,			Other (Explain in F				allow Aquita			
		rial Imagery (B7)		Miei (Expiani II	(emaiks)			C-Neutral T			
	ained Leaves (E		,						est (D3) oss (D8) (LRR	T III	
	200001	33)					or.	lagilaini i	, , , , , , , , , , , , , , , , , , ,	. 1, 0,	
Field Observations	s:										
Surface Water Pres	ent? Yes _	X No		Depth (inches):	6						
Water Table Preser		No _		Depth (inches):	>20						
Saturation Present?	_	No _	X	Depth (inches):	>20	Wetland Hyd	drology Pre	esent?	Yes X	_ No	
(includes capillary fr											4
Describe Record	ded Data (strea	ım gauge, monit	oring well, a	aerial photos, prev	ious inspection	s), if available:) :				
Remarks:											\dashv
Reiliains.											
A positive indica	ation of wetland	hydrology was	observed (a	nt least one primar	ry indicator).						
•		•									
A positive indica	tion of wetland	hydrology was	observed (a	at least two secon	dary indicators)						
Aquatic Fauna:	crabs.										

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft.)	% cover	Species?	Status	Number of Dominant Species	
4 44 64 4	,				That Are OBL, FACW, or FAC:1	(A)
2.						
3.	•				Total Number of Dominant	
4.					Species Across All Strata: 1	(B)
5.						
6.					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC: 100%	(A/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1. None Observed					Total % Cover of: Multiply by	:
2.					OBL species 90 x 1 = 90	
3.					FACW species 10 x 2 = 20	
4.					FAC species 0 x 3 = 0	
5.					FACU species	
6.	-				UPL species 0 x 5 = 0	
o			= Total Cover		Column Totals: 100 (A) 110	—— (B)
	50% of total cover:		20% of total cover:	0	Goldmin rotals. 100 (A) 110	(D)
Shrub Stratum (Plot size:	50% of total cover: 30 ft.)		20% of total cover.		Prevalence Index = B/A = 1.10	
1. None Observed	30 It.)				r revalence index – D/A – 1.10	
_					Hydrophytic Vegetation Indicators:	
· -					1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50%	
4					X 3 - Prevalence Index is $\leq 3.0^{1}$	
5						`
6					Problematic Hydrophytic Vegetation ¹ (Explain)
			= Total Cover	_	1	
	50% of total cover:	0	20% of total cover:	0	'Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)		.,		be present, unless disturbed or problematic.	
1. Typha latifolia			Yes	OBL	Definitions of Five Vegetation Strata:	
2. Andropogon glomeratus		10	No	FACW	Tree - Woody plants, excluding woody vines,	
3. Borrichia frutescens		5	No	OBL_	approximately 20 ft (6m) or more in height and 3 in.	
4. Schoenoplectus pungens		15	No	OBL	(7.6 cm) or larger in diameter at breast height (DBH).	
5					Continue Was developed a suple discourse de crises	
6					Sapling - Woody plants, excluding woody vines,	
7					approximately 20 ft (6 m) or more in height and less	
8					than 3 in. (7.6 cm) DBH.	
9						
10					Shrub - Woody plants, excluding woody vines,	
11					approximately 3 to 20 ft (1 to 6 m) in height.	
		100	= Total Cover			
	50% of total cover:	50	20% of total cover:	20	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:	30 ft.)				herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2					3 ft (1 m) in height.	
3						
4					Woody vine - All woody vines, regardless of height.	
5						
		0	= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes X No	
Remarks: (if observed, list mo	orphological adaptat	ions below).			
A positive indication of hydrop	hytic vegetation was	s observed	(>50% of dominant	species index	ked as OBL, FACW, or FAC).	
. , , ,				-	· · · · · · · · · · · · · · · · · · ·	
A positive indication of hydrop	hytic vegetation was	sobserved	(Prevalence Index is	s ≤ 3.00).		

Color (moist) Scolor (moist) Scolo	O-16 10Y 5/1 100 None — Clay Shell hash mixed with matrix Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Type: D=Depletion RM=Reduced Matrix, MS=Masked Sand Grains. Clay Shell hash mixed with matrix Indicators (PL=Porce Lining, M=Matrix. Indicators (PL=Porce Lining, M=Matrix. Indicators of Problematic Hydric Soils *: Indicators of Problematic Hydric Soils*: Indicators of Problematic Hydric Soil Present? Type: D=Depletion RM=Reduced Vertic (F18) (MLRA 150A, 150B) (MLRA 149A, 153C, 153D) (MLRA 149A, 153C, 153D) (MLRA 149A, 150C, 153D)	Depth	Matrix			Redox F	eatures			
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Pydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (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) Black Histo (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A Hydrogen Sulfide (A4) X Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, S) Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) Organic Bodies (A6) (LRR P, T, U) Pepleted Dark Surface (F7) Red Parent Material (TF2) Mucky Mineral (A7) (LRR P, T, U) Pepleted Dark Surface (F7) Red Parent Material (TF2) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Other (Explain in Remarks) Depleted Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Sandy Mucky Mineral (S1) (LRR O, S) Piedmont Floodplain Soils (F19) (MLRA 149A) Sandy Mucky Mineral (S1) (LRR O, S) Piedmont Floodplain Soils (F20) (MLRA 149A) Sandy Redox (S5) Piedmont Floodplain Soils (F20) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Hydric Soil Present? Yes X No Hydric Soil Present? Yes X No	Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. PL=Pore Lining, M=Matrix. Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	inches)	Color (moist)		Color (moist)	%_	Type ¹	Loc ²	Texture	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Tydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) Dark Surface (S9) (LRR S, T, U) Polyvalue Below Surface (S9) (LRR S, T, U) Polyvalue Below Surface (S9) (LRR S, T, U) Loamy Mucky Mineral (F1) (LRR O) Polyvalue Below Surface (S9) (LRR S, T, U) Polyvalue Surface (F18) (outside MLRA 150A Polyvalue Surface (F18) (URR P, S, Anomalous Bright Loamy Soils (F19) (LRR P, S, Anomalous Bright Loamy Soils (F19) (LRR P, S, Anomalous Bright Loamy Soils (F19) (LRR P, S, S) Poleta Ochric (F11) (MLRA 151) Poleta Below Dark Surface (A12) Poleta Ochric (F11) (MLRA 151) Poleta Ochric (F13) (LRR P, T, U) Poleta Ochric (F17) (MLRA 151) Poleta Ochric (F17) (MLRA 151) Poleta Ochric (F17) (MLRA 151) Poleta Ochric (F17) (MLRA 150A) Poleta Ochric (F18) (MLRA 150A) Poleta Ochric (F19) (MLRA 149A)	Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. **Juncation: PL=Pore Lining, M=Matrix.** hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	0-16	10Y_5/1_	100	None				Clay	Shell hash mixed with
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histosol (A2) Black Histic (A3) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O, Piedmont Floodplain Soils (F19) (LRR S, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR U) Depleted Dark Surface (F1) Muck (A9) (LRR P, T, U) Redox Dark Surface (F6) Muck Presence (A8) (LRR U) Depleted Below Dark Surface (F1) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Sandy Redox (S5) Deleted Othric (F11) (MLRA 151) Reduced Vertic (F18) (outside MLRA 150A) Sandy Redox (S5) Deleted Dark Surface (F13) Deleted Redox Derpessions (F8) Umbric Surface (F13) (LRR O, 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) Jindicators of Problematic Hydric Soils (F10) Redox Oepressions (F8) Which (A10) (LRR O) Anomalous Bright Loamy Soils (F20) Were Shallow Dark Surface (TF12) Other (Explain in Remarks) Jindicators of hydrophytic vegetation and 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) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histosol (A2) Histosol (A3) Histosol (A3) Histosol (A4) Histosol (A4) Histosol (A3) Histosol (A4) Histosol (A5) Histosol (A6) Histosol (A									matrix
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histosol (A2) Black Histic (A3) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O, Piedmont Floodplain Soils (F19) (LRR S, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR U) Depleted Dark Surface (F1) Muck (A9) (LRR P, T, U) Redox Dark Surface (F6) Muck Presence (A8) (LRR U) Depleted Below Dark Surface (F1) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Sandy Redox (S5) Deleted Othric (F11) (MLRA 151) Reduced Vertic (F18) (outside MLRA 150A) Sandy Redox (S5) Deleted Dark Surface (F13) Deleted Redox Derpessions (F8) Umbric Surface (F13) (LRR O, 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) Jindicators of Problematic Hydric Soils (F10) Redox Oepressions (F8) Which (A10) (LRR O) Anomalous Bright Loamy Soils (F20) Were Shallow Dark Surface (TF12) Other (Explain in Remarks) Jindicators of hydrophytic vegetation and 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) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histosol (A2) Histosol (A3) Histosol (A3) Histosol (A4) Histosol (A4) Histosol (A3) Histosol (A4) Histosol (A5) Histosol (A6) Histosol (A									
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histosol (A2) Black Histic (A3) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O, Piedmont Floodplain Soils (F19) (LRR S, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR U) Depleted Dark Surface (F1) Muck (A9) (LRR P, T, U) Redox Dark Surface (F6) Muck Presence (A8) (LRR U) Depleted Below Dark Surface (F1) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Sandy Redox (S5) Deleted Othric (F11) (MLRA 151) Reduced Vertic (F18) (outside MLRA 150A) Sandy Redox (S5) Deleted Dark Surface (F13) Deleted Redox Derpessions (F8) Umbric Surface (F13) (LRR O, 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) Jindicators of Problematic Hydric Soils (F10) Redox Oepressions (F8) Which (A10) (LRR O) Anomalous Bright Loamy Soils (F20) Were Shallow Dark Surface (TF12) Other (Explain in Remarks) Jindicators of hydrophytic vegetation and 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) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histosol (A2) Histosol (A3) Histosol (A3) Histosol (A4) Histosol (A4) Histosol (A3) Histosol (A4) Histosol (A5) Histosol (A6) Histosol (A									
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histosol (A2) Black Histic (A3) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O, Piedmont Floodplain Soils (F19) (LRR S, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR U) Depleted Dark Surface (F1) Muck (A9) (LRR P, T, U) Redox Dark Surface (F6) Muck Presence (A8) (LRR U) Depleted Below Dark Surface (F1) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Sandy Redox (S5) Deleted Othric (F11) (MLRA 151) Reduced Vertic (F18) (outside MLRA 150A) Sandy Redox (S5) Deleted Dark Surface (F13) Deleted Redox Derpessions (F8) Umbric Surface (F13) (LRR O, 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) Jindicators of Problematic Hydric Soils (F10) Redox Oepressions (F8) Which (A10) (LRR O) Anomalous Bright Loamy Soils (F20) Were Shallow Dark Surface (TF12) Other (Explain in Remarks) Jindicators of hydrophytic vegetation and 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) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histosol (A2) Histosol (A3) Histosol (A3) Histosol (A4) Histosol (A4) Histosol (A3) Histosol (A4) Histosol (A5) Histosol (A6) Histosol (A									
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histosol (A2) Black Histic (A3) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O, Piedmont Floodplain Soils (F19) (LRR S, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR U) Depleted Dark Surface (F1) Muck (A9) (LRR P, T, U) Redox Dark Surface (F6) Muck Presence (A8) (LRR U) Depleted Below Dark Surface (F1) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Sandy Redox (S5) Deleted Othric (F11) (MLRA 151) Reduced Vertic (F18) (outside MLRA 150A) Sandy Redox (S5) Deleted Dark Surface (F13) Deleted Redox Derpessions (F8) Umbric Surface (F13) (LRR O, 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) Jindicators of Problematic Hydric Soils (F10) Redox Oepressions (F8) Which (A10) (LRR O) Anomalous Bright Loamy Soils (F20) Were Shallow Dark Surface (TF12) Other (Explain in Remarks) Jindicators of hydrophytic vegetation and 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) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histosol (A2) Histosol (A3) Histosol (A3) Histosol (A4) Histosol (A4) Histosol (A3) Histosol (A4) Histosol (A5) Histosol (A6) Histosol (A									
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histosol (A2) Black Histic (A3) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O, Piedmont Floodplain Soils (F19) (LRR S, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR U) Depleted Dark Surface (F1) Muck (A9) (LRR P, T, U) Redox Dark Surface (F6) Muck Presence (A8) (LRR U) Depleted Below Dark Surface (F1) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Sandy Redox (S5) Deleted Othric (F11) (MLRA 151) Reduced Vertic (F18) (outside MLRA 150A) Sandy Redox (S5) Deleted Dark Surface (F13) Deleted Redox Derpessions (F8) Umbric Surface (F13) (LRR O, 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) Jindicators of Problematic Hydric Soils (F10) Redox Oepressions (F8) Which (A10) (LRR O) Anomalous Bright Loamy Soils (F20) Were Shallow Dark Surface (TF12) Other (Explain in Remarks) Jindicators of hydrophytic vegetation and 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) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histosol (A2) Histosol (A3) Histosol (A3) Histosol (A4) Histosol (A4) Histosol (A3) Histosol (A4) Histosol (A5) Histosol (A6) Histosol (A									
Histosol (A1)	Histosol (A1)		•					² Location: Pl	•	•
Histic Epipedon (A2) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A Hydrogen Sulfide (A4) X Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Muck y Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) 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) Derived Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Histic Epipedon (A2) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Hydrogen Sulfide (A4) X Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, Anomalous Bright Loamy Soils (F20) Piedmont Floodplain Soils (F19) (LRR P, S, Anomalous Bright Loamy Soils (F20) Mucky Mineral (A7) (LRR P, T, U) Peleted Dark Surface (F6) Murka 153B) Red Parent Material (TF2) Muck Presence (A8) (LRR U) Peleted Dark Surface (F7) Red Parent Material (TF2) Peleted Below Dark Surface (A11) Peleted Below Dark Surface (A11) Peleted Below 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) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	•	,	icable to al	-		•			<u>-</u>
Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A Hydrogen Sulfide (A4) X 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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A Reduced Vertic (F18) (LRR O, Piedmont Floodplain Soils (F19) (MLRA 153B) Reduced Vertic (F18) (MLRA 153B) Reduced Vertic (F18) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 150A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Black Histic (A3) Hydrogen Sulfide (A4) K Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Organic Bodies (A6) (LRR P, T, U) Stripted Below Dark Surface (A11) Sandy Mucky Mineral (S1) (LRR P, T, U) Depleted Dark Surface (F10) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR P, S) Sandy Redox (A55) Sandy Redox (A55) Depleted Dark Surface (A56) Sandy Redox Dark Surface (A57) Edemort Floodplain Soils (F19) (LRR P, T, U) Depleted Dark Surface (F7) Marl (F10) (LRR U) Depleted Derive (F13) (MLRA 151) Thick Dark Surface (A12) Sandy Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F12) Umbric Surface (F13) Sandy Mucky Mineral (B1) (LRR O, S) Sandy Redox (A15) Sandy Redox (A15) Derive (Explain in Remarks) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (outside MLRA 150A) (MLRA 153B) Anomalous Bright Loamy Soils (F20) Marl (F2) Anomalous Bright Loamy Soils (F20) MLRA 153B) Reduced Vertic (F18) (outside MLRA 150A) Anomalous Bright Loamy Soils (F20) Piedmont Floodplain Soils (F19) (MLRA 151) Type: Depth (inches): Hydric Soil Present? Yes X No Reduced Vertic (F18) (outside MLRA 150A) Reduced Vertic (F18) (LRR P, S, Anomalous Bright Loamy Soils (F20) (MLRA 149A), 153C, 153D)		` '				, , ,			
Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR V) 1 cm Muck (A9) (LRR P, T) Depleted Dark Surface (F7) Mari (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Thick 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) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Bedox 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) Dark Surface (S7) Derived Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Redox Dark Surface (F6) (MLRA 153B) Red Parent Material (TF2) Wery Shallow Dark Surface (TF12) Other (Explain in Remarks) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Jelta Ochric (F13) (LRR P, T, U) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No							· ·		
Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stem Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Depleted Depressions (F8) 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 Obric (F11) (MLRA 150A) Sandy Redox (S7) (LRR P, T, U) Depleted Obric (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A7) (LRR P, T, U) Stratifi		` ,			-	, , ,	O)		, , ,
Organic Bodies (A6) (LRR P, T, U) Sem Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, T, U) Redox Depressions (F8) Marl (F10) (LRR U) Depleted Dark Surface (F7) Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Wetland hydrology must be present, unless disturbed or problematic. Delta Ochric (F18) (MLRA 150A) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Organic Bodies (A6) (LRR P, T, U) Standy Mineral (S1) (LRR O, S) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) Medox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Marl (F10) (LRR U) Depleted Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Delta Ochric (F13) (LRR P, T, U) Sandy Mucky Mineral (S1) (LRR O, S) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Redox Dark Surface (F6) (MLRA 153B) Redox Dark Surface (F7) Red Parent Material (TF2) Red Parent		, ,		X Loamy	y Gleyed Ma	trix (F2)			
5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Dark Surface (F7) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 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) Reduced Vertic (F18) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Dark Surface (F7) 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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, T, U) Peleted Dark Surface (F7) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Iron-Manganese Masses (F12) (LRR O, P, T) Jalindicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:		• ()			•	,			- , , ,
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 (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depthed Below Dark Surface (A11) Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	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) Dark Surface (S7) (LRR P, S, T, U) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Redux Depressions (F8) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Jepleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Jepleted Ochric (F13) (LRR P, T, U) Umbric Surface (F13) (LRR P, T, U) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No		, , ,	· · · ·		Dark Surfa	ce (F6)		(MLRA 15	BB)
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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Stripped Matrix (S7) Dark Surface (S7) (LRR P, S, T, U) Stripped Matrix (S8) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Marl (F10) (LRR U) Delta Ochric (F11) (MLRA 151) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Wetland hydrology must be present, unless disturbed or problematic. Metland North Metha 151 Sendy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Jepleted Ochric (F13) (LRR P, T, U) Umbric Surface (F13) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR 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. Marl (F10) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR P, T, U) Marl (F10) (LRR O, P, T) Alpha (LR 151) Marl (F10) (LRR O, P, T) Alpha (LRR 151) Marl (F10) (LRR O, P, T) Alpha (LR 151) Marl (F10) (LRR O, P, T) Alpha (LR 151) Alpha (LR									` '
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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) Restrictive Layer (if observed): Type: Depth (inches): Denta Ochric (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) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	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) Restrictive Layer (if observed): Type: Depth (inches):			ce (A11)		`	, .	•	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) Restrictive Layer (if observed): Type: Depth (inches): Depth (inches): Type: Depth (inches): Type: Depth (inches): Type: Depth (inches): 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) Hydric Soil Present? Yes X No	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) Restrictive Layer (if observed): Type: Depth (inches): 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) Hydric Soil Present? Yes X No		` ,			-				, , , ,
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) Restrictive Layer (if observed): Type: Depth (inches): Type: Depth (inches): Depth (inches): Destrictive Layer (If observed): Type: Type	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) Restrictive Layer (if observed): Type: Depth (inches): Depth (inches): Delta Ochric (F1/) (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 X No	Coast I	Prairie Redox (A16) ((MLRA 150				U)		
Sandy Redox (S5)	Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No		. , ,	(LRR O, S)	Delta	Ochric (F17)	(MLRA 151)		4555 4	or programme.
Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Park Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Sandy	Gleyed Matrix (S4)		Reduc	ced Vertic (F	18) (MLRA 150	DA, 150B)		
Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:	Sandy	Redox (S5)		Piedm	ont Floodpla	ain Soils (F19) ((MLRA 149A)		
Restrictive Layer (if observed): Type:	Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:	Strippe	d Matrix (S6)		Anom	alous Bright	Loamy Soils (F	(20) (MLRA 149	9A, 153C, 153D)	
Type: Depth (inches): Hydric Soil Present? Yes X No	Type: Depth (inches): Hydric Soil Present? YesX No Remarks:	Dark S	urface (S7) (LRR P,	S, T, U)						
Type: Depth (inches): Hydric Soil Present? Yes X No	Type: Depth (inches): Remarks: Hydric Soil Present? YesX No	7 4 wi - 4 i	l a (if abaamaad)							
Depth (inches): Hydric Soil Present? Yes X No	Depth (inches): Hydric Soil Present? YesX No Remarks:		Layer (If observed)	:						
	Remarks:									
Remarks:		Depth (in	iches):					Hydric	Soil Present?	res X No
Remarks:										
	A positive indication of hydric soil was observed.	Remarks:								
		1 positive iii	dication of flydric sol	i was obser	veu.					
A positive indication of riguito soil was observed.										
A positive indication of riguito soil was observed.										
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x positive indication of riyuno son was observed.										

Project/Site:	Bl	uewater SPM		County:	Nueces	3	Sampling	Date: J	January 29, 2019
Applicant/Owner:		Lloyd Engine	_		State:	Texas		oint:	
• • • • • • • • • • • • • • • • • • • •	E. Munscher	and	J. Mitchell	Section, Town	- nship, Range:			N/A	
Landform (hillslope, terrac					oncave, convex	. none):	None		: 0-5
Subregion (LRR or MLRA		None			27.879913				n: North American Datum 1983
Soil Map Unit Name:			clay loam, rarely fl				Classification:		N/A
Are climatic / hydrologic co	onditions on th				No		explain in Rer		
		lo ,or Hydrology			d? Are "Norm	`	•	,	X No
		lo ,or Hydrology		ally problemation			explain any a	_	
CUMMARY OF FIN				•		•	•		•
SUMMARY OF FIN	DINGS - P	Attach Site ma	ip snowing s	ampling p	omi locatio	ns, trans	sects, imp	ortant ie	atures, etc.
Hydrophytic Vegetation F	resent?	YesX	No						
Hydric Soil Present?		Yes X	No	Is the Sa	mpled Area				
Wetland Hydrology Pres	ent?	Yes	No X	within a	Wetland?	Υ	es	No_	Χ
Remarks:									
This point was deteri	minad not to h	a within a watland	due to the leak of	wotland bydrale	an.				
This point was deter	illiled flot to be	e willilli a welland (due to the lack of	welland nydroid	ogy.				
The curvey area was	datarminad t	a ha wattar than na	rmal at the time of	founces					
The survey area was	determined to	be weller man no	imai at the time of	i survey.					
HYDROLOGY									
Wetland hydrology	Indicators:					Secon	dary Indicator	s (minimum	of two required)
Primary Indicators (m	inimum of one	e is required; check	all that apply)				Surface Soil (-	
Surface Water	(A1)		Aquatic Fauna	a (B13)			Sparsely Veg	etated Conca	ave Surface (B8)
High Water Ta			_	(B15) (LRR U)			Drainage Patt	terns (B10)	, ,
Saturation (A3		_	_				Moss Trim Lir		
Water Marks (•			, ,	ing Roots(C3)		Dry-Season V		(C2)
Sediment Dep	•		_	leduced Iron (C	- , ,		Crayfish Burro		•
Drift Deposits		_	_	eduction in Tille	*		-		al Imagery (C9)
Algal Mat or C		_	— Thin Muck Sur		, ,		Geomorphic F		
Iron Deposits (, ,		Other (Explain	, ,			Shallow Aquit		
Inundation Vis	•	Imagery (B7)	_ ` '	,			FAC-Neutral		
—— Water-Stained		0 , (,					Sphagnum m	, ,	(R T. U)
	(- /						1 3	(-/ (, -,
Field Observations:									
Surface Water Present?	Yes	No X	Depth (inche	es): N/A					
Water Table Present?	Yes		' \ Depth (inche	<i>'</i> ——					
Saturation Present?	Yes			<i>'</i> ——	Wetland	Hydrology	Present?	Yes	No X
(includes capillary fringe)						.,			
Describe Recorded [)ata (stream d	lauge monitoring w	ell aerial photos	previous inspe	ctions) if availa	ble:			
Dodding Rodding L	rata (otroam g	aago, montoning v	on, donar priotoc,	provious mope	onono), ii avana	D10.			
Remarks:									
Kemarks.									
No positive indication	of wetland hy	drology was obser	ved.						
'	,	, 3,							

Sampling Point:	DPA023_U
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		Absolute	Dominant	Indicator	Dominance Test worksheet:		
Trac Charles (Dist size)	20 # \						
4 44 64 4	30 ft.)	% cover	Species?	Status	Number of Dominant Species	•	(4)
					That Are OBL, FACW, or FAC:	2	(A)
2							
3					Total Number of Dominant		
4			<u> </u>		Species Across All Strata:	2	(B)
5							
6.					Percent of Dominant Species		
		0	= Total Cover		That Are OBL, FACW, or FAC:	100%	(A/B)
	50% of total cover:		20% of total cover:	0			(,,,,,
Cardina Chartura (Dlataina			20 % of total cover.		Prevalence Index Worksheet:		
Sapling Stratum (Plot size: _	30 ft.)						
1. None Observed					Total % Cover of:	Multiply by:	
2					OBL species 40	x 1 =40	
3					FACW species0	x 2 = 0	
4			. <u> </u>		FAC species 30	x 3 = 90	
5					FACU species15	x 4 = 60	
6					UPL species 0	x 5 = 0	
		0	= Total Cover		Column Totals: 85	(A) 190	—— (B)
	50% of total cover:		20% of total cover:	0			`-'
Shrub Stratum (Plot size:			Lo/6 I total cover.		Prevalence Index = B/A =	2.24	
	30 ft.)				r-revalence muex – B/A =		<u> </u>
1. None Observed							
2					Hydrophytic Vegetation Indicate	ors:	
3					1 - Rapid Test for Hydrop	hytic Vegetation	
4					X 2 - Dominance Test is >5	0%	
5					X 3 - Prevalence Index is ≤	3.0 ¹	
6.					Problematic Hydrophytic	Vegetation ¹ (Explain))
		0	= Total Cover			- , , , ,	
	50% of total cover:		20% of total cover:	0	¹ Indicators of hydric soil and wetl	and hydrology must	
Herb Stratum (Plot size:			2070 Of total cover.		be present, unless disturbed or pre-		
		10	No	OBL			
1. Borrichia frutescens		10	No	OBL_	Definitions of Five Vegetation S		
2. Muhlenbergia schreberi		30	Yes	FAC	Tree - Woody plants, excluding w		
3. Distichlis spicata		30	Yes	OBL	approximately 20 ft (6m) or more i	n height and 3 in.	
4. Cynodon dactylon		15	No	FACU	(7.6 cm) or larger in diameter at be	reast height (DBH).	
5							
6					Sapling - Woody plants, excluding	g woody vines,	
7.					approximately 20 ft (6 m) or more	in height and less	
8.					than 3 in. (7.6 cm) DBH.		
					, , ,		
9					Shrub - Woody plants, excluding	woody vines.	
10					approximately 3 to 20 ft (1 to 6 m)	,	
11					approximately 5 to 20 ft (1 to 6 ff)	iii neigni.	
			= Total Cover		Hada Alltricture /	Ambouto to the P	
	50% of total cover:	42.5	20% of total cover:	17	Herb - All herbaceous (non-woody	,, ,	
Woody Vine Stratum (Plot si	ize: 30 ft.)				herbaceous vines, regardless of s		
1. None Observed					plants, except woody vines, less t	han approximately	
2.					3 ft (1 m) in height.		
3.							
4.					Woody vine - All woody vines, re-	gardless of height.	
							ŀ
5		0	- Total Cover		Ludrophytic		
			= Total Cover	_	Hydrophytic		
	50% of total cover:	0	20% of total cover:	0	Vegetation		
					Present? Yes X	No	
Remarks: (if observed, list	t morphological adaptat	ions below).				
A manistra in diansina of burd			/> F00/ -f -li				
A positive indication of hyd	irophytic vegetation was	opserved	(>50% or dominant	species index	xed as OBL, FACW, or FAC).		
A positive indication of hyd	drophytic vegetation was	s observed	(Prevalence Index is	$s \le 3.00$).			

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Type: Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.	Depth	Matrix			Redox F	eatures			
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Indicators for Problematic. Indicators for Problematic, Indicators of Populative, (A10) (LRR Q, P, S, Anomalous Bright Loamy Soils (F19) (LRR Q, P, T) Type: C=Concentration, D=Depletion Matrix, GS	•	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histosol (A2) Black Histic (A3) Black Histic (A3) Commy Mucky Mineral (F1) (LRR O) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR V) Depleted Dark Surface (F6) Muck (A9) (LRR P, T, U) Depleted Below Dark Surface (F7) Muck (A9) (LRR P, T) Depleted Below Dark Surface (F8) Marl (F10) (LRR V) Depleted Below Dark Surface (F7) Depleted Below Dark Surface (F7) Depleted Below Dark Surface (F11) (MLRA 151) Thick Dark Surface (A12) Sandy Mucky Mineral (F1) (MLRA 150A) Sandy Mucky Mineral (F3) (LRR P, T, U) Depleted Othric (F13) (MLRA 150A) Sandy Redox (S5) Piedmont Floodplain in Remarks) Delta Othric (F17) (MLRA 151) Tron-Manganese Masses (F12) (LRR O, T) Sandy Redox (S5) Delta Othric (F17) (MLRA 150A) Sandy Redox (S5) Delta Othric (F17) (MLRA 150A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	0-16	10YR 6/1		10YR 6/6	2	С	M	Sandy Clay	
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histosol (A2) Black Histic (A3) Black Histic (A3) Commy Mucky Mineral (F1) (LRR O) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR V) Depleted Dark Surface (F6) Muck (A9) (LRR P, T, U) Depleted Below Dark Surface (F7) Muck (A9) (LRR P, T) Depleted Below Dark Surface (F8) Marl (F10) (LRR V) Depleted Below Dark Surface (F7) Depleted Below Dark Surface (F7) Depleted Below Dark Surface (F11) (MLRA 151) Thick Dark Surface (A12) Sandy Mucky Mineral (F1) (MLRA 150A) Sandy Mucky Mineral (F3) (LRR P, T, U) Depleted Othric (F13) (MLRA 150A) Sandy Redox (S5) Piedmont Floodplain in Remarks) Delta Othric (F17) (MLRA 151) Tron-Manganese Masses (F12) (LRR O, T) Sandy Redox (S5) Delta Othric (F17) (MLRA 150A) Sandy Redox (S5) Delta Othric (F17) (MLRA 150A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No									
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Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histosol (A2) Black Histic (A3) Black Histic (A3) Commy Mucky Mineral (F1) (LRR O) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR V) Depleted Dark Surface (F6) Muck (A9) (LRR P, T, U) Depleted Below Dark Surface (F7) Muck (A9) (LRR P, T) Depleted Below Dark Surface (F8) Marl (F10) (LRR V) Depleted Below Dark Surface (F7) Depleted Below Dark Surface (F7) Depleted Below Dark Surface (F11) (MLRA 151) Thick Dark Surface (A12) Sandy Mucky Mineral (F1) (MLRA 150A) Sandy Mucky Mineral (F3) (LRR P, T, U) Depleted Othric (F13) (MLRA 150A) Sandy Redox (S5) Piedmont Floodplain in Remarks) Delta Othric (F17) (MLRA 151) Tron-Manganese Masses (F12) (LRR O, T) Sandy Redox (S5) Delta Othric (F17) (MLRA 150A) Sandy Redox (S5) Delta Othric (F17) (MLRA 150A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No									
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histosol (A2) Black Histic (A3) Black Histic (A3) Commy Mucky Mineral (F1) (LRR O) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR V) Depleted Dark Surface (F6) Muck (A9) (LRR P, T, U) Depleted Below Dark Surface (F7) Muck (A9) (LRR P, T) Depleted Below Dark Surface (F8) Marl (F10) (LRR V) Depleted Below Dark Surface (F7) Depleted Below Dark Surface (F7) Depleted Below Dark Surface (F11) (MLRA 151) Thick Dark Surface (A12) Sandy Mucky Mineral (F1) (MLRA 150A) Sandy Mucky Mineral (F3) (LRR P, T, U) Depleted Othric (F13) (MLRA 150A) Sandy Redox (S5) Piedmont Floodplain in Remarks) Delta Othric (F17) (MLRA 151) Tron-Manganese Masses (F12) (LRR O, T) Sandy Redox (S5) Delta Othric (F17) (MLRA 150A) Sandy Redox (S5) Delta Othric (F17) (MLRA 150A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Type: C=C	concentration. D=De	oletion. RM	======================================	—— ∕IS=Maske	d Sand Grains.	² Location: P	L=Pore Lining, M=Matri	X.
Histosol (A1)									
Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A, 150A, 150B) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A, 153D) Reduced Vertic (F18) (outside MLRA 150A, 153D) Reduced Vertic (F18) (outside MLRA 150A, 150B) Reduced Vertic (F18) (outside MLRA 150A, 150B) Reduced Vertic (F18) (outside MLRA 150A, 150B) Reduced Vertic (F18) (outside MLRA 150A) Reduced Vertic (F18) (MLRA 153B) Reduced Vertic (F18) (MLRA 153B) Reduced Vertic (F18) (MLRA 153B) Reduced Vertic (F18) (MLRA 151) Reduced Vertic (F18) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Reduced Vertic (F18) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No							RR S, T, U)	1 cm Muck (A9)	(LRR O)
Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR P, T, U) Muck Presence (A8) (LRR U) Stratified Layers (A5) Depleted Dark Surface (F6) Muck Presence (A8) (LRR U) Redox Depressions (F8) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Depleted Ochric (F11) (MLRA 151) 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 Gleyed Matrix (F2) Peddox Dark Surface (F12) Umbric Surface (F12) (LRR O, P, T) Delta Ochric (F17) (MLRA 151) Thick Dark Surface (S5) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Histic E	Epipedon (A2)		Thin D	ark Surfac	e (S9) (LRR S,	T, U)	2 cm Muck (A10) (LRR S)
Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Bredox Dark Surface (F6) Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) 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. Reduced Vertic (F18) (MLRA 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Black H	Histic (A3)		Loamy	Mucky Mir	neral (F1) (LRR	O)	Reduced Vertic	(F18) (outside MLRA 150A,
Organic Bodies (A6) (LRR P, T, U) Sem Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Dark Surface (F8) Marl (F10) (LRR U) Depleted Delow Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Dark Surface (S7) Redox Depressions (F8) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) X Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Hydrog	gen Sulfide (A4)		Loamy	Gleyed Ma	atrix (F2)		Piedmont Flood	plain Soils (F19) (LRR P, S,
5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Dark Surface (F7) Marl (F10) (LRR U) Depleted Delta Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Redox Depressions (F8) Very Shallow Dark Surface (F12) Other (Explain in Remarks) Iron-Manganese Masses (F12) (LRR O, P, T) Wetland hydrology must be present, unless disturbed or problematic. Type: Depth (inches): Hydric Soil Present? Yes X No	Stratifie	ed Layers (A5)		Deplet	ed Matrix (F3)		Anomalous Brig	ht Loamy Soils (F20)
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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Marl (F10) (LRR U) Depressions (F8) Wery Shallow Dark Surface (TF12) Other (Explain in Remarks) In Charles (F12) (MLRA 151) Sell Cash (F12) (MLRA 151) Wetland hydrology must be present, unless disturbed or problematic. Wetland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. In Charles (F13) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. In Charles (F13) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. In Charles (F13) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. In Charles (F13) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. In Charles (F13) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. In Charles (F13) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematics. In Charles (F13) (LRR P, T, U) Wetland hyd	Organi	c Bodies (A6) (LRR	P, T, U)	Redox	Dark Surfa	ace (F6)		(MLRA 153B)	
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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Jepleted Ochric (F13) (LRR O, P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR O, P, T) Jepleted Ochric (F13) (MLRA 151) Nethodology must be present, unless disturbed or problematic. Methodology must		, , ,		U)Deplet	ed Dark Sเ	urface (F7)			, ,
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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Wetland hydrology must be present, unless disturbed or problematic. Pedduced Vertic (F13) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Reduced Vertic (F18) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Hydric Soil Present? Yes X No Hydric Soil Present? Yes X No		, , ,	-		•	` ,			, ,
Thick Dark Surface (A12)		, , , ,				-		Other (Explain in	n 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) Restrictive Layer (if observed): Type: Depth (inches): 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 (S1) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No			ice (A11)				· -	31	h
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) Restrictive Layer (if observed): Type: Depth (inches): Depth (inches): Sandy Mucky Mineral (S1) (LRR O, S) 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) Hydric Soil Present? Yes X No		,			-	, ,	· · · · ·		
Sandy Gleyed Matrix (S4)		, ,	-	<i>'</i>	,	, .	, U)	,	0, ,
X Sandy Redox (S5)		- , ,	(LKK U, S	<u> </u>	,		0A 4E0D)		
Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? YesX No						* *	•		
Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No					-	, ,		9A 153C 153D)	
Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? YesX No		` '	S. T. U)		ilous Brigin	t Loamy Cons (i	20) (MEIGA 14	JA, 1000, 100D)	
Type: Depth (inches): Hydric Soil Present? YesX No	Bank 6	unass (57) (211117)	0, 1, 0,						
Depth (inches): Hydric Soil Present? Yes X No	Restrictive	Layer (if observed)):						
Depth (inches): Hydric Soil Present? Yes X No	Type:								
Remarks:	Depth (ir						Hydri	c Soil Present? Yes _	X No
Remarks:									
	Remarks:								
	A positive in	idication of nydric so	ii was obse	ervea.					
A positive indication of hydric soil was observed.									
A positive indication of nydric soil was observed.									
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A positive indication of hydric soil was observed.									

Project/Site:		Bluewater SPM		County:	Nueces	Sampling	Date: Ja	anuary 30, 2019
Applicant/Owner:		Lloyd Eng	ineering	Sta				DPA024_PEM
Investigator(s):	E. Munsch	ner and	J. Mitchell	Section, Townshi		Campio i	N/A	3171021 <u>1</u> 1 2.W
Landform (hillslope, te				Local relief (conc	· · · —	ne): Concave	Slope (%):	0-5
Subregion (LRR or ML				,			,	North American Datum 1983
Soil Map Unit Name:	, <u> </u>		n clay loam, rarely f			NWI Classification:		N/A
Are climatic / hydrologi	c conditions o				No	(if no, explain in Rei	marks.)	
Are Vegetation	No ,Soil_	No ,or Hydrolo	gy No signit	ficantly disturbed?	Are "Normal Ci	rcumstances" prese	nt? Yes	X No
Are Vegetation	No ,Soil	No ,or Hydrolo	gy No natur	rally problematic?	(If ne	eded, explain any a	nswers in Ren	narks.)
SUMMARY OF F	INDINGS	- Attach site n	nap showing s	sampling poir	nt locations.	transects. imi	portant fea	atures, etc.
				· · ·		, ,		
	D 10							
Hydrophytic Vegetation	on Present?	Yes X Yes X	No		alad Ausa			
Hydric Soil Present? Wetland Hydrology P	rocent?	Yes X	No	Is the Samp		Voc. V	No	
Welland Hydrology P	resent?	1es	No	within a vve	lianu r	Yes X	. NO	
Remarks:								
	tarminad ta h	a within a watland du	is to the process of	of all 2 watland arita	ria			
i nis point was de	termined to be	e within a wetland du	ie to the presence d	or all 3 welland crite	па.			
The survey area	vae determine	ed to be wetter than i	normal at the time o	of curvey				
The survey area	vas determine	u to be weller than i	iorniai at the time o	ii survey.				
HYDROLOGY								
Wetland hydrolo	gy Indicators	5 :				Secondary Indicator	rs (minimum o	f two required)
	•	one is required; che	ck all that apply)			Surface Soil (, ,	
Surface Wa	` '	_	X Aquatic Fauna	, ,				ve Surface (B8)
	r Table (A2)	-		(B15) (LRR U)		Drainage Pat		
X Saturation		-		fide Odor (C1)		Moss Trim Lir	, ,	
Water Mark		-		cospheres on Living	Roots(C3)		Vater Table (C	2)
	Deposits (B2)	_		Reduced Iron (C4)		Crayfish Burr	, ,	
Drift Depos		_		Reduction in Tilled S	oils (C6)		sible on Aerial	Imagery (C9)
X Algal Mat o	r Crust (B4)	_	Thin Muck Su	, ,		Geomorphic F	Position (D2)	
Iron Depos		_	Other (Explain	n in Remarks)		Shallow Aquit	tard (D3)	
		rial Imagery (B7)				X FAC-Neutral		
Water-Stai	ned Leaves (B	i9)				Sphagnum m	oss (D8) (LRF	₹ T, U)
Field Observations								
Field Observations:		No. V	Donth (inch	oo): N/A				
Surface Water Prese Water Table Present			Depth (inche Depth (inche	<i>'</i>				
Saturation Present?		X No	' ` `	·	Wetland Hydu	rology Present?	Yes X	No
(includes capillary frir	_	NO	Depth (inch	es). <u> </u>	welland riyur	rology Present?	163 <u> </u>	_ 140
Describe Recorde	ed Data (strea	m gauge, monitoring	well, aerial photos.	previous inspectio	ns). if available:			
2000.1201.1000.41	ra Data (ottoal	gaage,ee	won, donar priotos,	providuo inopodiio	,, a. aa			
Remarks:								
A positive indicati	on of wetland	hydrology was obse	rved (at least one p	rimary indicator).				

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft)	% cover	Species?	Status	Number of Dominant Species	
1 Name Observed		70 00 001	_оросіос.	Otatuo	·	(A)
					That Ale OBE, I AOW, OI I AO.	(~)
2					T	
3					Total Number of Dominant	
4					Species Across All Strata: 3 ((B)
5						
6					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC: ((A/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1. None Observed					Total % Cover of: Multiply by:	
2.					OBL species 95 x 1 = 95	_
3					FACW species 0 x 2 = 0	_
3					FAC species 0 x 3 = 0	_
4				-		_
5					FACU species 0 x 4 = 0	_
6					UPL species	
			= Total Cover		Column Totals: (A) 95	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = 1.00	
1. None Observed						
2					Hydrophytic Vegetation Indicators:	
3					1 - Rapid Test for Hydrophytic Vegetation	
4.					X 2 - Dominance Test is >50%	
5.					X 3 - Prevalence Index is ≤ 3.0 ¹	
6.					Problematic Hydrophytic Vegetation ¹ (Explain)	
o			= Total Cover		(Explain)	
	50% of total cover:		20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Harb Stratum (Diet size)			20% of total cover.			
Herb Stratum (Plot size:	30 ft.)	20	V	ODI	be present, unless disturbed or problematic.	
1. Borrichia frutescens		30	Yes	OBL	Definitions of Five Vegetation Strata:	
2. Schoenoplectus pungens		40	Yes	OBL	Tree - Woody plants, excluding woody vines,	
3. Distichlis spicata		25	Yes	OBL	approximately 20 ft (6m) or more in height and 3 in.	
4	•				(7.6 cm) or larger in diameter at breast height (DBH).	
5						
6					Sapling - Woody plants, excluding woody vines,	
7					approximately 20 ft (6 m) or more in height and less	
8					than 3 in. (7.6 cm) DBH.	
9						
10.					Shrub - Woody plants, excluding woody vines,	
11.					approximately 3 to 20 ft (1 to 6 m) in height.	
		95	= Total Cover			
	50% of total cover:		20% of total cover:	19	Herb - All herbaceous (non-woody) plants, including	
Woody Vino Stratum (Plot size:			2070 01 total 00001.	10	herbaceous vines, regardless of size, and woody	
Woody Vine Stratum (Plot size:)				plants, except woody vines, less than approximately	
1. None Observed					3 ft (1 m) in height.	
2					on (1 m) in neight.	
3					Marantonian Allocando cinas na mandlana af hainh	
4					Woody vine - All woody vines, regardless of height.	
5						
		0	= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes X No	
Remarks: (if observed, list me	orphological adaptati	ons below). 			
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	enaciae index	ved as ORL EACW or EAC)	
A positive indication of Hydrop	nyac vegetation was	JD361 VEU	(- 00 % of dominant	opeoles illuex	ACC 45 CDL, I ACVV, OI I ACJ.	

Depth	Matrix			Redox F	eatures				
inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-16	10YR 6/2	96	10YR 6/6	4	С	M	Sandy Clay	Shell hash and gravel mixed	
								with matrix.	
		· 							
 Tvpe: C=0	 Concentration, D=Dep	letion. RM	I=Reduced Matrix. N	MS=Masked	d Sand Grains.	² Location: P	L=Pore Lining, M=I	Matrix.	
	ls Indicators: (Appl		•					roblematic Hydric Soils ³ :	
•	ol (A1)		•		Surface (S8) (L I	RR S. T. U)		(A9) (LRR O)	
Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U)						(A10) (LRR S)			
Black Histic (A3) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR 0)						ertic (F18) (outside MLRA 150A			
				- ,		loodplain Soils (F19) (LRR P, S,			
<u> </u>						Bright Loamy Soils (F20)			
Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) ——Depleted Matrix (F3) Redox Dark Surface (F6)						(MLRA 153			
	Mucky Mineral (A7) (L			ed Dark Su	,		•	Material (TF2)	
	Presence (A8) (LRR			Depression	` '			` '	
	Muck (A9) (LRR P, T)	-		10) (LRR I	,		Very Shallow Dark Surface (TF12) Other (Explain in Remarks)		
	ed Below Dark Surfa				5) F11) (MLRA 15	:4)	Other (Expi	all III Nelliaiks)	
	Dark Surface (A12)	ce (ATT)		,	Masses (F12) (-	³ Indicato	rs of hydrophytic vegetation and	
	` ,	MI DA 15		•	13) (LRR P, T,			nydrology must be present,	
	Prairie Redox (A16) (· —	,	i) (MLRA 151)	0)	unless di	sturbed or problematic.	
	Mucky Mineral (S1)	LKK U, J		•	, ,	0A 1EOD\			
	Gleyed Matrix (S4)			•	F18) (MLRA 15 0	· ·			
	Redox (S5)			•	ain Soils (F19) (•	04 4520 4530)		
	ed Matrix (S6)	C T II)	Anoma	ilous Brigrii	Loanly Solis (F	20) (WILKA 14	9A, 153C, 153D)		
Dark s	Surface (S7) (LRR P,	S, I, U)							
Poetrictivo	Layer (if observed)								
	Layer (II observed)	•							
Type:						l	0.11.00.10.10.11		
Depth (i	nches):					Hydri	c Soil Present? Y	'es <u>X</u> No	
Remarks:									
v positive ii	ndication of hydric soi	i was obse	ervea.						

Project/Site:		Bluewater SPM		County:	Nueces	Sampling	Date: Ja	anuary 30, 2019
Applicant/Owner:		Lloyd Engi	ineering	Sta			Point:	
Investigator(s):	E. Munsche	er and _	J. Mitchell	Section, Townshi	ip, Range:		N/A	
Landform (hillslope, ter				Local relief (cond	ave, convex, nor	ne): None	Slope (%):	0-5
Subregion (LRR or MLI	RA):	Non	e	Lat:27.8	379336 Loi	ng: -97.09830	3 Datum:	North American Datum 1983
Soil Map Unit Name:		ljar	n clay loam, rarely f	flooded		NWI Classification:		N/A
Are climatic / hydrologic			•	· / —		(if no, explain in Re	,	
Are Vegetation	No,Soil	Yes ,or Hydrolo				ircumstances" prese		
Are Vegetation	No,Soil	No ,or Hydrolo	gy No natur	rally problematic?	(If ne	eeded, explain any a	nswers in Ren	narks.)
SUMMARY OF F	INDINGS -	Attach site m	nap showing s	sampling poir	nt locations,	transects, im	portant fea	atures, etc.
Hydrophytic Vegetation	n Present?	Yes X	No					
Hydric Soil Present?		Yes	No <u>X</u>		oled Area			
Wetland Hydrology Pi	esent?	Yes	No X	within a We		Yes	No	X
, 3,								
Remarks:								
This point was de	ermined not to	be within a wetland	d due to the lack of	hydric soils and we	etland hydrology.			
				,				
The survey area v	as determined	d to be wetter than r	normal at the time o	of survey.				
·				•				
HYDROLOGY								
Wetland hydrolo	av Indicators:					Sacandary Indicate	ro (minimum o	f two required)
_	-	one is required; che	ck all that annly)			Secondary Indicato Surface Soil		i two required)
Surface Wa	-	ziie is required, one	Aquatic Fauna	a (B13)			` ,	ve Surface (B8)
High Water	` ,	_		s (B15) (LRR U)		Drainage Pat		re Surface (DO)
Saturation (_		lfide Odor (C1)	•			
	•	_		, ,		Moss Trim Li	, ,	20)
Water Mark	, ,	_		zospheres on Living	J Roois(C3)		Water Table (C	,2)
	eposits (B2)	_		Reduced Iron (C4)		Crayfish Burr		
Drift Depos		_		Reduction in Tilled S	30ils (C6)		sible on Aerial	Imagery (C9)
Algal Mat o	, ,	_	Thin Muck Su	, ,		Geomorphic	, ,	
Iron Deposi		_	Other (Explain	n in Remarks)		Shallow Aqui	tard (D3)	
		al Imagery (B7)				X FAC-Neutral	, ,	
Water-Stair	ed Leaves (B9	∌)				Sphagnum m	noss (D8) (LRF	₹ T, U)
Field Observations:					1			
Surface Water Preser	nt? Yes	No X	Depth (inch	es): N/A				
Water Table Present			Depth (inch	· ——				
Saturation Present?	Yes	No X		es): >20	Wetland Hydr	rology Present?	Yes	No X
(includes capillary frin								
Describe Recorde	d Data (stream	n gauge, monitoring	well, aerial photos,	, previous inspection	ons), if available:			
Remarks:								
No positive indica	ion of wetland	hydrology was obs	erved.					

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft)	% cover	Species?	Status	Number of Dominant Species	
4. Name Observed		70 0010.	<u> </u>		·	(A)
			·		That Ale Obe, I AOW, OI I AO.	(~)
2.					Total Name to a Company	
3			-		Total Number of Dominant	(B)
4					Species Across All Strata: 2	(B)
5						
6					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC: 100%	(A/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1. None Observed					Total % Cover of: Multiply by:	
2.			<u> </u>		OBL species 45 x 1 = 45	
3.					FACW species 0 x 2 = 0	
			· · · · · · · · · · · · · · · · · · ·		FAC species 45 x 3 = 135	_
4						_
5						_
6					UPL species	
		0	= Total Cover		Column Totals: (A) 220	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = 2.20	
1. None Observed						
2					Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
4.					X 2 - Dominance Test is >50%	
5.			-		X 3 - Prevalence Index is ≤ 3.0 ¹	
					Problematic Hydrophytic Vegetation ¹ (Explain)	
6			T-1-1-0		Problematic Trydrophytic vegetation (Explain)	
			= Total Cover		1	
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
Muhlenbergia schreberi		40	Yes	<u>FAC</u>	Definitions of Five Vegetation Strata:	
2. Distichlis spicata		30	Yes	OBL	Tree - Woody plants, excluding woody vines,	
3. Borrichia frutescens		15	No	OBL	approximately 20 ft (6m) or more in height and 3 in.	
4. Solidago canadensis		10	No	FACU	(7.6 cm) or larger in diameter at breast height (DBH).	
5. Ambrosia psilostachya		 5	No	FAC		
6.			·		Sapling - Woody plants, excluding woody vines,	
7.					approximately 20 ft (6 m) or more in height and less	
					than 3 in. (7.6 cm) DBH.	
8					, ,	
9					Shrub - Woody plants, excluding woody vines,	
10			-			
11					approximately 3 to 20 ft (1 to 6 m) in height.	
		100	= Total Cover			
	50% of total cover:	50	20% of total cover:	20	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:	30 ft.)				herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2.					3 ft (1 m) in height.	
3.						
4					Woody vine - All woody vines, regardless of height.	
5			·			
·		0	= Total Cover		Hydrophytic	
	EON of total agreem			0		
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes X No	
Remarks: (if observed, list mo	orphological adaptati	ons below).			
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	species index	ked as OBL, FACW, or FAC).	
	· -				·	

Depth	Matrix			Redox F	eatures					
inches)	Color (moist)	%_	Color (moist)	%_	Type ¹	Loc ²	Texture	Remarks		
0-3	10YR 6/2	100	None				Sandy Clay	Disturbed Soils		
								Shovel Restriction		
		_		_						
T C-(-Dadward Matrix N			21	L-Dana Linina M-I	M-4-:		
	Concentration, D=De Is Indicators: (Appl					Location: P	L=Pore Lining, M=I	Problematic Hydric Soils ³ :		
•		licable to a	•		,	D C T II\		•		
Histosol (A1)				Polyvalue Below Surface (S8) (LRR S, T, U)				(A9) (LRR O)		
Histic Epipedon (A2) Black Histic (A3)				Thin Dark Surface (S9) (LRR S, T, U) Loamy Mucky Mineral (F1) (LRR O)				2 cm Muck (A10) (LRR S) Reduced Vertic (F18) (outside MLRA 150A,E		
	gen Sulfide (A4)			Loamy Gleyed Matrix (F2)				Piedmont Floodplain Soils (F19) (LRR P, S, T		
	ied Layers (A5)			Depleted Matrix (F3)				Anomalous Bright Loamy Soils (F20)		
	ic Bodies (A6) (LRR	P T II)		Redox Dark Surface (F6)				(MLRA 153B)		
	Mucky Mineral (A7) (I			Depleted Dark Surface (F7)				Red Parent Material (TF2)		
	Presence (A8) (LRR		· ·	Redox Depressions (F8)				Very Shallow Dark Surface (TF12)		
	Muck (A9) (LRR P, T	-		Marl (F10) (LRR U)				Other (Explain in Remarks)		
	ted Below Dark Surfa			, ,	-, F11) (MLRA 15	1)		,		
	Dark Surface (A12)	, ,		•	Masses (F12) (I	•	³ Indicators of hydrophytic vegetation and			
 Coast	Prairie Redox (A16)	(MLRA 150	OA) Umbrio	Umbric Surface (F13) (LRR P, T, U)				wetland hydrology must be present,		
— Sandy	Mucky Mineral (S1)	(LRR O, S	Delta C	ochric (F17) (MLRA 151)		unless disturbed or problematic.			
 Sandy	Gleyed Matrix (S4)		Reduce	ed Vertic (F	18) (MLRA 150	A, 150B)				
Sandy	Redox (S5)		Piedmo	nt Floodpl	ain Soils (F19) (MLRA 149A)				
Strippe	ed Matrix (S6)		Anoma	lous Bright	Loamy Soils (F	20) (MLRA 14	9A, 153C, 153D)			
Dark S	Surface (S7) (LRR P,	S, T, U)								
Restrictive	Layer (if observed)):								
Type:	Gravel/Shell Has	sh								
Depth (i	nches):3					Hydrid	Soil Present? Y	/es NoX		

No positive indication of hydric soils was observed.

Project/Site:		Bluewater SPM		County:	Nueces	Sampling	Date: Is	anuary 30, 2019
Applicant/Owner:		Lloyd Engi	neerina	Sta				DPA026_PEM
Investigator(s):	E. Munsc		J. Mitchell	Section, Townshi		· · · · · · · · · · · · · · · · · · ·	N/A	<u> </u>
Landform (hillslope, te				Local relief (conc	· · · —	ne): Concave		0-5
Subregion (LRR or ML		T					Datum	: North American Datum 1983
Soil Map Unit Name:	Mustano	g fine sand, 0 to 1 per						PEM1Ah
Are climatic / hydrolog	c conditions	on the site typical for t	his time of year?	(Yes / No)	No	(if no, explain in Rer	marks.)	
Are Vegetation	No ,Soil	No ,or Hydrolog	gy <u>No</u> signi	ficantly disturbed?	Are "Normal Ci	rcumstances" preser	nt? Yes	X No
Are Vegetation	No ,Soil	No ,or Hydrolog	gy No natur	rally problematic?	(If ne	eded, explain any a	nswers in Rer	narks.)
SUMMARY OF F	INDINGS	- Attach site m	ap showing s	sampling poir	nt locations,	transects, imp	oortant fe	atures, etc.
								-
Hydrophytic Vogototi	n Procent?	Voc. V	No					
Hydrophytic Vegetation Hydric Soil Present?	ni Fieseiit!	Yes X Yes X	No No		aled Area			
Wetland Hydrology P	resent?	Yes X	No	within a We		Yes X	No	
Wedana riyarology r	CSCIII:	103 <u>X</u>			.tiuria i	103 <u>X</u>		
Remarks:				<u> </u>				
This point was de	termined to b	oe within a wetland du	e to the presence o	of all 3 wetland crite	eria			
l line point mae as			o to the processor t					
The survey area	was determin	ed to be wetter than n	ormal at the time o	of survey.				
HYDROLOGY								
Wetland hydrolo	gy Indicator	 'S:				Secondary Indicator	e (minimum o	of two required)
		of one is required; chec	ck all that apply)		-	Surface Soil (•	T two required)
X Surface Wa	•	•	X Aquatic Fauna	a (B13)		X Sparsely Veg		ve Surface (B8)
	Table (A2)	_		s (B15) (LRR U)	-	Drainage Patt		10 04.1400 (20)
Saturation		_	X Hydrogen Sul	, , ,	-	 Moss Trim Lir		
Water Mar				zospheres on Living	Roots(C3)	 Dry-Season V	, ,	C2)
Sediment [Deposits (B2)			Reduced Iron (C4)	. , ,	Crayfish Burro		,
Drift Depos			Recent Iron R	Reduction in Tilled S	Soils (C6)		, ,	I Imagery (C9)
	r Crust (B4)		Thin Muck Su	ırface (C7)	•	Geomorphic F	Position (D2)	5 , , ,
Iron Depos	, ,	_	Other (Explain	, ,	-	 Shallow Aquit		
Inundation	Visible on Ae	erial Imagery (B7)			·	X FAC-Neutral	Test (D5)	
	ned Leaves (I					Sphagnum m	oss (D8) (LRI	₹ T, U)
Field Observations:								
Surface Water Prese		X No		· ——				
Water Table Present	? Yes_	NoX	Depth (inch	es): <u>>20</u>				
Saturation Present?	Yes _	NoX	Depth (inch	es): <u>>20</u>	Wetland Hydr	rology Present?	Yes X	No
(includes capillary frin								
Describe Records	d Data (strea	am gauge, monitoring	well, aerial photos,	, previous inspectio	ns), if available:			
Remarks:								
A positive indicati	on of wetland	d hydrology was obser	ved (at least one p	rimary indicator).				
A positive indicati	on of wetland	d hydrology was obser	ved (at least two s	econdary indicators	;) .			
i .								

Tree Stratum (Plot size: 30 ft.)

1. None Observed

Sapling Stratum (Plot size: 30 ft.)

1. None Observed

Shrub Stratum (Plot size: 30 ft.)

1. Schinus terebinthifolia

Herb Stratum (Plot size: 30 ft.)

1. Borrichia frutescens

2. Spartina spartinae

3. Andropogon glomeratus

5. _____

Woody Vine Stratum (Plot size: 30 ft.)

1. None Observed

Absolute

% cover

Dominant

Species?

______0 = Total Cover 50% of total cover: _____0 20% of total cover: ____0

______ = Total Cover 50% of total cover: _____ 10 ____ 20% of total cover: _____ 4

0 = Total Cover 50% of total cover: 0 20% of total cover: 0

No

___No__

Yes__

OBL

OBL

FACW

____20___

10___

60___

10

Indicator

Status

S	Sampling Point:	DI	PA026_PEN	И	
Dominance Test	worksheet:				
Number of Domina That Are OBL, FA	•		2	(A)	
Total Number of D Species Across All		2		(B)	
Percent of Domina That Are OBL, FAG	10	0%	(A/E	3)	
Prevalence Index	Worksheet:				
Total %	Cover of:	1	Multiply by:		
OBL species	70	x 1 =	70		
FACW species	10	x 2 =	20		
FAC species	20	x 3 =	60		
FACU species	0	x 4 =	0		
UPL species	0	x 5 =	0		
Column Totals:	100	(A)	150		(B)
Prevalend	ce Index = B/A	=	1.50		
X 2 - Domin X 3 - Preval Problema	Test for Hydrop ance Test is >5 ence Index is ≤ tic Hydrophytic ric soil and wet	ohytic Vege 50% 3.0 ¹ Vegetation	n ¹ (Explain) logy must		
be present, unless					
Definitions of Fiv Tree - Woody plan approximately 20 f (7.6 cm) or larger i	nts, excluding v t (6m) or more	voody vine in height a	nd 3 in.		
Sapling - Woody papproximately 20 f than 3 in. (7.6 cm)	t (6 m) or more	-			
Shrub - Woody pla approximately 3 to	_	-	es,		
Herb - All herbace	ous (non-wood	y) plants, ii	ncluding		

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

Woody vine - All woody vines, regardless of height.

Hydrophytic			
Vegetation			
Present?	Yes	Х	No

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

epth	Matrix			Redox F	eatures			
nches)	Color (moist)	_%_	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks
0-16	7.5YR 5/1	98	10YR 4/6	2	С	PL	Sandy Clay	
								
 Type: C=Cer	 ncentration, D=Dep	lotion DM-	Matrix M		d Sand Crains	2l continue DI	 _=Pore Lining, M=Matr	
						Location. Pt		_
•	Indicators: (Appli	cable to al	•		•	DD 0 T III		ematic Hydric Soils ³ :
Histosol (` ,				Surface (S8) (L		1 cm Muck (A9)	
	ipedon (A2)				e (S9) (LRR S,		2 cm Muck (A10	
Black His			Loamy	Mucky Mir	neral (F1) (LRR	O)		(F18) (outside MLRA 150A,E
Hydroger	n Sulfide (A4)		Loamy	Gleyed Ma	atrix (F2)		Piedmont Flood	plain Soils (F19) (LRR P, S, T
Stratified	Layers (A5)		Deplet	ed Matrix (F3)		Anomalous Brig	ht Loamy Soils (F20)
Organic E	Bodies (A6) (LRR F	P, T, U)	Redox	Dark Surfa	ace (F6)		(MLRA 153B)	
5 cm Mud	cky Mineral (A7) (L	RR P, T, U	Deplet	ed Dark Sเ	urface (F7)		Red Parent Mat	erial (TF2)
Muck Pre	esence (A8) (LRR I	J)	Redox	Depressio	ns (F8)		Very Shallow D	ark Surface (TF12)
1 cm Mud	ck (A9) (LRR P, T)		Marl (F	10) (LRR	U)		Other (Explain i	n Remarks)
 Depleted	Below Dark Surface	ce (A11)			(F11) (MLRA 1	51)		
	rk Surface (A12)				Masses (F12)(· -	³ Indicators of	hydrophytic vegetation and
	airie Redox (A16) (MLRA 150		-	F13) (LRR P, T	· · · · · · ·		ology must be present,
	ucky Mineral (S1) (· —	•) (MLRA 151)	, - ,	unless distur	ped or problematic.
	leyed Matrix (S4)			•	F18) (MLRA 15	0A 150B)		
X Sandy Re					lain Soils (F19)			
				=	, ,	-	A, 153C, 153D)	
	Matrix (S6)	o =	AIIOIII	alous brigin	LUAITIY SUIIS (I	-20) (WILKA 143	A, 193C, 193D)	
Dark Sun								
Restrictive La						Undeid	Cail Bussent2 Ves	V. No.
Restrictive La	ayer (if observed):					Hydric	Soil Present? Yes	X No
Type: Depth (inch	ayer (if observed):					Hydric	Soil Present? Yes	X No
Restrictive La Type: Depth (inch	ayer (if observed): hes):					Hydric	Soil Present? Yes	XNo
Restrictive La Type: Depth (inch	ayer (if observed):					Hydric	Soil Present? Yes	X No
Restrictive La Type: Depth (inch	ayer (if observed): hes):					Hydric	Soil Present? Yes	XNo
Restrictive La Type: Depth (inch	ayer (if observed): hes):					Hydric	Soil Present? Yes	X No
Restrictive La Type: Depth (inch	ayer (if observed): hes):					Hydric	Soil Present? Yes	X No
Restrictive La Type: Depth (inch	ayer (if observed): hes):					Hydric	Soil Present? Yes	X No
Restrictive La Type: Depth (inch	ayer (if observed): hes):					Hydric	Soil Present? Yes	X No
Restrictive La Type: Depth (inch	ayer (if observed): hes):					Hydric	Soil Present? Yes	X No
Restrictive La Type: Depth (inch	ayer (if observed): hes):					Hydric	Soil Present? Yes	X No
Restrictive La Type: Depth (inch	ayer (if observed): hes):					Hydric	Soil Present? Yes	X No
Restrictive La Type: Depth (inch	ayer (if observed): hes):					Hydric	Soil Present? Yes	X No
Restrictive La Type: Depth (inch	ayer (if observed): hes):					Hydric	Soil Present? Yes	X No
Restrictive La Type: Depth (inch	ayer (if observed): hes):					Hydric	Soil Present? Yes	X No
Restrictive La Type: Depth (inch	ayer (if observed): hes):					Hydric	Soil Present? Yes	X No
Restrictive La Type: Depth (inch	ayer (if observed): hes):					Hydric	Soil Present? Yes	X No
Restrictive La Type: Depth (inch	ayer (if observed): hes):					Hydric	Soil Present? Yes	X No
Restrictive La Type: Depth (inch	ayer (if observed): hes):					Hydric	Soil Present? Yes	X No
Restrictive La Type: Depth (inch	ayer (if observed): hes):					Hydric	Soil Present? Yes	X No
Restrictive La Type: Depth (inch	ayer (if observed): hes):					Hydric	Soil Present? Yes	X No
Restrictive La Type: Depth (inch	ayer (if observed): hes):					Hydric	Soil Present? Yes	X No
Restrictive La Type: Depth (inch	ayer (if observed): hes):					Hydric	Soil Present? Yes	X No
Restrictive La Type: Depth (inch	ayer (if observed): hes):					Hydric	Soil Present? Yes	X No
Restrictive La Type: Depth (inch	ayer (if observed): hes):					Hydric	Soil Present? Yes	X No
Restrictive La Type: Depth (inch	ayer (if observed): hes):					Hydric	Soil Present? Yes	X No
Type: Depth (inch	ayer (if observed): hes):					Hydric	Soil Present? Yes	X No

Project/Site:	Blue	ewater SPM	C	ounty:	Nueces	Sampling	Nata: Ja	anuary 30,	2010
Applicant/Owner:		Lloyd Enginee		State			Point:		
Investigator(s):	E. Munscher			Section, Township			N/A		
Landform (hillslope, ter				ocal relief (conca	· · · —	ne): Convex	Slope (%):		0-5
Subregion (LRR or MLF	-	Т				ong:	- ' ' '		
Soil Map Unit Name:		sand, 0 to 1 percent				NWI Classification:		PEM1Ah	
Are climatic / hydrologic	conditions on the	site typical for this	time of year?	(Yes / No)	No	(if no, explain in Re	marks.)		
Are Vegetation	No ,Soil Yes	s,or Hydrology	No significa	antly disturbed?	Are "Normal C	ircumstances" prese	nt? Yes	X No	o
Are Vegetation	No ,Soil No	o, or Hydrology	No naturally	y problematic?	(If ne	eeded, explain any a	nswers in Ren	narks.)	
SUMMARY OF F	INDINGS - At	tach site mar	showing sar	mpling poin	t locations	, transects, im	portant fea	atures,	etc.
Γ						· ·	•		
Hydrophytic Vegetatio	n Dracant?	Yes	No X						
Hydric Soil Present?		Yes	No X	Is the Sampl	led Area				
Wetland Hydrology Pr		Yes	No X	within a Wet		Yes	No	x	
Remarks:									
This point was det	ermined not to be	within a wetland du	e to the lack of all	three wetland cri	iteria				
11110 point 1120	offinion flot to 2 -	Within a monana	o to the last s	tilioo wottena	tona.				
The survey area w	as determined to l	be wetter than norm	nal at the time of s	urvey.					
•				,					
LINDBOI OCA									
HYDROLOGY Wetland hydrolo	ny Indicators:					Odem/ Indicator	/inimum o	f t rogu	· 1\
		is required; check a	that annly)			Secondary Indicator Surface Soil	•	f two requ	irea)
Surface Wa	•	s required, orieon a	Aquatic Fauna (E	 213)			etated Conca	∕≙ Surface	(R8)
High Water	` '		Marl Deposits (B	*				/6 Juliaoc	; (50)
Saturation (Hydrogen Sulfide			Drainage Patterns (B10) Moss Trim Lines (B16)			
Water Mark			Oxidized Rhizosp	, ,	Roots(C3)		Nater Table (0	C2)	
Sediment D	` '		Presence of Red		,	Crayfish Burr	,	,	
Drift Deposi			Recent Iron Redu	` ,	oils (C6)		sible on Aerial	Imagery (C9)
Algal Mat or	, ,		Thin Muck Surface		··· (,	Geomorphic			0-7
Iron Deposi	, ,		Other (Explain in	, ,		Shallow Aqui	, ,		
	/isible on Aerial Im	nagery (B7)	• •	•		FAC-Neutral	, ,		
	ed Leaves (B9)						oss (D8) (LRF	R T, U)	
Field Observations:									
Surface Water Preser		NoX	,						
Water Table Present?	·	NoX	Depth (inches):	· · · · · · · · · · · · · · · · · · ·					
Saturation Present? (includes capillary fring	Yes	NoX	Depth (inches):	: <u>>20</u>	Wetland Hyd	Irology Present?	Yes	_ No	<u>X</u>
	- ,	itoring we	" abotoo ne	····i inappostice	· · · · · · · · · · · · · · · · · · ·				
Describe Recorde	d Data (stream gai	uge, monitoring wel	il, aeriai pnotos, pre	evious inspection	is), if available.				
Remarks:									
·									
No positive indicat	ion of wetland hyd	lrology was observe	∍d.						

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft)	% cover	Species?	Status	Number of Dominant Species	
1 Name Observed		70 00 701	_ороскос.	Otatao	That Are OBL, FACW, or FAC: 1 (A	
					That rice obe, triow, of the	٠,
2					Total Number of Dominant	
3.			·			
4					Species Across All Strata: 5 (B)
5						
6			· _ ·		Percent of Dominant Species	 .
			= Total Cover		That Are OBL, FACW, or FAC: (A	√B)
	50% of total cover:	0	20% of total cover:	0	Prevalence Index Worksheet:	
Sapling Stratum (Plot size:	30 ft.)					
1. None Observed					Total % Cover of: Multiply by:	_
2			· -		OBL species 0 x 1 = 0	_
3			<u> </u>		FACW species 10 x 2 = 20	_
4			<u> </u>		FAC species 15 x 3 = 45	_
5					FACU species 15 x 4 = 60	_
6			. <u>———</u>		UPL species x 5 = 350	_
		0	= Total Cover		Column Totals:110 (A)475	_ (B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:			•		Prevalence Index = B/A = 4.32	
1. Schinus terebinthifolia		15	Yes	FAC		_
2.					Hydrophytic Vegetation Indicators:	
3.	•		·		1 - Rapid Test for Hydrophytic Vegetation	
					2 - Dominance Test is >50%	
4					3 - Prevalence Index is ≤ 3.0 ¹	
5					Problematic Hydrophytic Vegetation ¹ (Explain)	
6		45			Problematic Hydrophytic Vegetation (Explain)	
	500/ 5/ / 1		= Total Cover	0	to a contract to the contract of	
Harl Objections (District			20% of total cover:	3	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)	00	.,	un	be present, unless disturbed or problematic.	
1. Opuntia engelmannii		20	Yes	UPL_	Definitions of Five Vegetation Strata:	
2. Schizachyrium scoparium		15	Yes	FACU	Tree - Woody plants, excluding woody vines,	
3. Heterotheca subaxillaris		15	Yes	UPL	approximately 20 ft (6m) or more in height and 3 in.	
4. Verbena halei		10	No	<u>UPL</u>	(7.6 cm) or larger in diameter at breast height (DBH).	
5. Bothriochloa ischaemum		25	Yes	UPL		
6. Andropogon glomeratus		10	No	FACW	Sapling - Woody plants, excluding woody vines,	
7					approximately 20 ft (6 m) or more in height and less	
8					than 3 in. (7.6 cm) DBH.	
9			. <u>———</u>			
10					Shrub - Woody plants, excluding woody vines,	
11			. <u>———</u>		approximately 3 to 20 ft (1 to 6 m) in height.	
		95	= Total Cover			
	50% of total cover:	47.5	20% of total cover:	19	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:			•		herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2.					3 ft (1 m) in height.	
3			·			
4.	·				Woody vine - All woody vines, regardless of height.	
5			= Total Cover		Hydrophytic	
	50% of total assista		•	0		
	50% of total cover:	U	20% of total cover:	0	Vegetation	
					Present? Yes NoX	
Remarks: (if observed, list mo	orphological adaptati	ons below).			
No positive indication of hydro	phytic vegetation wa	as observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).	
•			•	•	•	

DepthMatrix			Redox F	eatures			
inches) Color (moist)	% (Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks
0							Disturbed Soils
		aluand Madain A			21	I - Dana Linina M-	NA Aniis
Гуре: C=Concentration, D=Deple	•				Location: P	L=Pore Lining, M=	
ydric Soils Indicators: (Applica	able to all L			-			Problematic Hydric Soils ³ :
Histosol (A1)				Surface (S8) (L I	· · · · · · ·		(A9) (LRR O)
Histic Epipedon (A2)				e (S9) (LRR S, '			(A10) (LRR S)
Black Histic (A3)		Loamy	Mucky Mir	neral (F1) (LRR	O)		ertic (F18) (outside MLRA 150A,
Hydrogen Sulfide (A4)		Loamy	Gleyed Ma	atrix (F2)		Piedmont F	Floodplain Soils (F19) (LRR P, S, 1
Stratified Layers (A5)		Deplet	ed Matrix (F3)		Anomalous	Bright Loamy Soils (F20)
Organic Bodies (A6) (LRR P,	T, U)	Redox	Dark Surfa	ace (F6)		(MLRA 15	BB)
5 cm Mucky Mineral (A7) (LRI	R P, T, U)	Deplet	ed Dark Sเ	ırface (F7)		Red Paren	t Material (TF2)
Muck Presence (A8) (LRR U)	1	Redox	Depressio	ns (F8)		Very Shallo	ow Dark Surface (TF12)
1 cm Muck (A9) (LRR P, T)		—— Marl (F	10) (LRR	U)		Other (Exp	lain in Remarks)
Depleted Below Dark Surface	(A11)			F11) (MLRA 15	1)		,
Thick Dark Surface (A12)	. ,			Masses (F12) (-	³ Indicato	rs of hydrophytic vegetation and
Coast Prairie Redox (A16) (M	I RΔ 150Δ)		-	F13) (LRR P, T ,			hydrology must be present,
Sandy Mucky Mineral (S1) (LF	-			') (MLRA 151)	σ,	unless d	isturbed or problematic.
Sandy Gleyed Matrix (S4)	itit 0 , 0 ,		,	7 (MLRA 151) F18) (MLRA 150	A 150B)		
					· ·		
Sandy Redox (S5)			=	ain Soils (F19) (· ·	04 4500 4500)	
Stripped Matrix (S6) Dark Surface (S7) (LRR P, S,		Anoma	alous Brign	Loamy Solis (F	20) (NILKA 14)	9A, 153C, 153D)	
Type: Shell Hash/Fill Mate Depth (inches): 0	Silai				Hydrid	Soil Present?	/es No X
Depth (inches): 0	Situ				Hydrid	Soil Present?	/es NoX
Depth (inches): 0					Hydrid	c Soil Present?	Yes No X
Depth (inches): 0		/ed.			Hydrid	e Soil Present?	/es NoX
Depth (inches): 0 emarks: o positive indication of hydric soils	s was observ		hash and f	ill material prese		e Soil Present?	Yes No X
Depth (inches): 0 emarks: o positive indication of hydric soils	s was observ		hash and f	ill material prese		e Soil Present?	/es No X
• •	s was observ		hash and f	ill material prese		c Soil Present?	Yes NoX
Depth (inches): 0 emarks: o positive indication of hydric soils	s was observ		hash and f	ill material prese		e Soil Present?	/es NoX
Depth (inches): 0 emarks: o positive indication of hydric soils	s was observ		hash and f	ill material prese		e Soil Present?	Yes No X
Depth (inches): 0 emarks: o positive indication of hydric soils	s was observ		hash and f	ill material prese		c Soil Present?	Yes No X
Depth (inches): 0 emarks: o positive indication of hydric soils	s was observ		hash and f	ill material prese		e Soil Present?	Yes No X
Depth (inches): 0 emarks: o positive indication of hydric soils	s was observ		hash and f	ill material prese		c Soil Present?	Yes No X
Depth (inches): 0 emarks: o positive indication of hydric soils	s was observ		hash and f	ill material prese		e Soil Present?	Yes No X
Depth (inches): 0 emarks: o positive indication of hydric soils	s was observ		hash and f	ill material prese		c Soil Present?	res No X
Depth (inches): 0 emarks: o positive indication of hydric soils	s was observ		hash and f	ill material prese		e Soil Present?	Yes NoX
Depth (inches): 0 emarks: o positive indication of hydric soils	s was observ		hash and f	ill material prese		c Soil Present?	Yes NoX
Depth (inches): 0 emarks: o positive indication of hydric soils	s was observ		hash and f	ill material prese		c Soil Present?	res NoX
Depth (inches): 0 emarks: o positive indication of hydric soils	s was observ		hash and f	ill material prese		c Soil Present?	Yes NoX
Depth (inches): 0 emarks: o positive indication of hydric soils	s was observ		hash and f	ill material prese		e Soil Present?	Yes NoX
Depth (inches): 0 emarks: o positive indication of hydric soils	s was observ		hash and f	ill material prese		c Soil Present?	Yes NoX

Project/Site:	Bluewater SPM	Co	ounty:	Nueces	Sampling	Date: Ja	anuary 30, 2019
Applicant/Owner:	Lloyd Enginee		Stat		Texas Sample P		DPA028 U
··· ——			ection, Township	o, Range:	·	N/A	
Landform (hillslope, terrace, e	etc.): Prairie			ave, convex, non	ne): None	Slope (%):	0-5
Subregion (LRR or MLRA):	T		_ Lat:27.8	52011 Lor	ng: <u>-97.07056</u> 5	5 Datum:	North American Datum 1983
Soil Map Unit Name: M	lustang fine sand, 0 to 1 percen	t slopes, occasiona	ılly flooded, frequ	uently ponded	NWI Classification:		N/A
Are climatic / hydrologic cond	litions on the site typical for this	time of year? (Yes / No)	No	(if no, explain in Rer	narks.)	
Are Vegetation No	_,Soil No ,or Hydrology		-		ircumstances" preser		
Are Vegetation No	_,Soil No ,or Hydrology	No naturally	problematic?	(If ne	eeded, explain any a	nswers in Rem	narks.)
SUMMARY OF FINDI	INGS - Attach site map	showing sar	npling poin	t locations,	transects, imp	portant fea	atures, etc.
			T				
Hydrophytic Vegetation Pres	sent? Yes	NoX					
Hydric Soil Present?	Yes	No X	Is the Samp	led Area			
Wetland Hydrology Present		No	within a We		Yes	No	
Remarks:							
This point was determine	ed not to be within a wetland du	ie to the lack of all	three wetland cr	iteria.			
The survey area was de	etermined to be wetter than norn	nal at the time of su	ırvey.				
HYDROLOGY							
Wetland hydrology Ind	licators:				Secondary Indicator	s (minimum of	f two required)
Primary Indicators (minir	mum of one is required; check a	all that apply)			Surface Soil 0	Cracks (B6)	
Surface Water (A	· —	Aquatic Fauna (E	313)		Sparsely Veg	etated Concav	ve Surface (B8)
High Water Table	(A2)	Marl Deposits (B			Drainage Patt		
Saturation (A3)		Hydrogen Sulfide	, ,		Moss Trim Lir	, ,	
Water Marks (B1)		Oxidized Rhizosp	_	Roots(C3)	Dry-Season V	Vater Table (C	(2)
Sediment Deposit	.s (B2)	Presence of Red	uced Iron (C4)		Crayfish Burro	ows (C8)	
Drift Deposits (B3		Recent Iron Redu	uction in Tilled S	oils (C6)	Saturation Vis	sible on Aerial	Imagery (C9)
Algal Mat or Crust	t (B4)	Thin Muck Surface	ce (C7)		Geomorphic F	osition (D2)	
Iron Deposits (B5)		Other (Explain in	Remarks)		Shallow Aquit	ard (D3)	
Inundation Visible	e on Aerial Imagery (B7)				FAC-Neutral	Test (D5)	
Water-Stained Le	aves (B9)				Sphagnum m	oss (D8) (LRR	₹ T, U)
Field Observations:							
	Voc. No. V	Depth (inches)	N/A				
Surface Water Present? Water Table Present?	Yes NoX Yes No X	. ' ` /					
Saturation Present?	Yes No X	Depth (inches)		Wetland Hydu	rology Present?	Yes	No X
(includes capillary fringe)	103 110 <u>X</u>	. Deptil (mones)		Wedana nyai	rology i resent.		- "
Describe Recorded Data	a (stream gauge, monitoring we	II, aerial photos, pre	evious inspection	ns), if available:			
	(·	,,			
Remarks:							
No positive indication of	wetland hydrology was observe	ed.					

	Absolute	Dominant	Indicator	Dominance Test worksheet:		
<u>Tree Stratum</u> (Plot size: 30 ft.)	% cover		Status	Number of Dominant Species		
	70 COVE	Оресіез:	Otatus	'	1	(\(\)
				That Are OBL, FACW, or FAC.	1	(A)
2						
3				Total Number of Dominant	_	
		<u> </u>		Species Across All Strata:	2	(B)
6				Percent of Dominant Species		
	0	= Total Cover		That Are OBL, FACW, or FAC:	50%	(A/B)
50% of total cover:	0	20% of total cover:	0			
Sapling Stratum (Plot size:30_ft)				Prevalence Index Worksheet:		
1. None Observed				Total % Cover of:	Multiply by:	
2				OBL species 0	x 1 = 0	
3.				FACW species 0	x 2 = 0	
4.		<u> </u>			x 3 = 90	
5.		<u> </u>		FACU species 0	x 4 = 0	
6.				· ———	x 5 = 400	
	0	= Total Cover		· —	(A) 490	(B)
50% of total cover:		20% of total cover:	0			(_)
Shrub Stratum (Plot size: 30 ft.)		2070 01 10141 00701.		Prevalence Index = B/A =	4.45	
1. None Observed				1 Tevalence maex – B/A –		
				Hydrophytic Venetation Indicators		
2				Hydrophytic Vegetation Indicators		
3		<u> </u>		1 - Rapid Test for Hydrophyl	=	
				2 - Dominance Test is >50%		
5		<u> </u>		3 - Prevalence Index is ≤ 3.0		
6		·		Problematic Hydrophytic Ve	getation (Explain)	
		= Total Cover				
50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland	d hydrology must	
Herb Stratum (Plot size: 30 ft.)				be present, unless disturbed or proble	ematic.	
Bothriochloa ischaemum	80	Yes	UPL	Definitions of Five Vegetation Stra	ıta:	
2. Muhlenbergia schreberi	30	Yes	<u>FAC</u>	Tree - Woody plants, excluding woo	dy vines,	
3		. <u> </u>		approximately 20 ft (6m) or more in h	eight and 3 in.	
4				(7.6 cm) or larger in diameter at brea	st height (DBH).	
5						
6				Sapling - Woody plants, excluding w	-	
7				approximately 20 ft (6 m) or more in h	height and less	
8				than 3 in. (7.6 cm) DBH.		
0						
10.		<u> </u>		Shrub - Woody plants, excluding wo	ody vines,	
11.				approximately 3 to 20 ft (1 to 6 m) in	height.	
	110	= Total Cover				
50% of total cover:		_	22	Herb - All herbaceous (non-woody) p	olants, including	
Woody Vine Stratum (Plot size: 30 ft.)		2070 Of total cover.		herbaceous vines, regardless of size	, and woody	
1. None Observed				plants, except woody vines, less than	n approximately	
•				3 ft (1 m) in height.	,	
2		·		, ,		
3				Woody vine - All woody vines, regar	rdless of height	
4				vvoody vine - All woody vines, regal	diess of fleight.	
5						
		= Total Cover		Hydrophytic		
50% of total cover:	0	20% of total cover:	0	Vegetation		
				Present? Yes N	o <u>X</u>	
Remarks: (if observed, list morphological adaptat	ions below).				
No positive indication of hydrophytic vegetation w	as observe	ed (>50% of dominan	t species ind	exed as FAC- or drier)		
The positive indication of flydropflytto vegetation w	us obscive	a (=00% of dominan	t opcoics ind	executes 1710 of uner).		

O-16 10YR 3/2 100 None	epth	Matrix		-	Redox F	eatures						
ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. **Total Cosils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Polyvalue Below Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A9) (LRR O) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) Organic Bodies (A6) (LRR P, T, U) Depleted 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, U) Depleted 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, U) Depleted Dark Surface (F6) (MLRA 153B) Sendy Surface (A6) (LRR P, T, U) Depleted Dark Surface (F7) Number Surface (F10) (LRR Q, P, T) Coast Prairie Redox (A11) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) (Inon-Manganese Masses (F12) (LRR Q, P, T) Sandy Mucky Mineral (S1) (LRR Q, S) Delta Ochric (F13) (MLRA 151) unless disturbed or problematic. Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A), 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Hydric Soil Present? Yes No X	nches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
Histosol (A1)	0-16	10YR 3/2_	100	None				Loamy Sand				
Histosol (A1)												
Histosol (A1)												
Histosol (A1)												
Histosol (A1)												
Histosol (A1)												
Histosol (A1)	ype: C=C	oncentration, D=De	oletion, RM	Reduced Matrix, N	//S=Masked	d Sand Grains.	² Location: P	L=Pore Lining, M=Matrix				
Histic Epipedon (A2) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR Q) Reduced Vertic (F18) (outside MLRA 150A Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Schward 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 Q, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Peter Material (TF2) Mari (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR Q, P, T) Delta Ochric (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 1511) Sandy Mucky Mineral (S1) (LRR Q, S) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Pretrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	ydric Soil	s Indicators: (Appl	icable to a	II LRRs, unless of	herwise no	oted.)			•			
Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A6) Depleted Matrix (F3) Redox Dark Surface (F6) Mucky Presence (A8) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 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) Dark Surface (S7) (LRR P, T, U) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Present? Hydric Soil Present? Yes No X	Histoso	ol (A1)		Polyva	lue Below S	Surface (S8) (L	RR S, T, U)	1 cm Muck (A9) (LRR O)			
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Depleted Matrix (F3) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) 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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, Anomalous Bright Loamy Soils (F20) Muck Presence (A8) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) John Mark (F10) (LRR P, T, U) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 151) Reduced Verio (F18) (MLRA 150A) Anomalous Bright Loamy Soils (F20) Muth (F2) Mark (F2) Piedmont Floodplain Soils (F19) (MLRA 151) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Depted Ochric (F17) (MLRA 151) and wetland hydrology must be present, unless disturbed or problematic. Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A), 153C, 153D) Depth (inches): Hydric Soil Present? Yes No X	Histic E	Epipedon (A2)		Thin D	T, U)	2 cm Muck (A10)	(LRR S)					
Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Screen (A5) Organic Bodies (A6) (LRR P, T, U) Screen (A6) (LRR P, T, U) Depleted Dark Surface (F6) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) 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 Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Sestrictive Layer (if observed): Type: Depth (inches): Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Redox Dark Surface (F7) Red Parent Material (TF2) What A 153B) Red Parent Material (TF2) (MLRA 151) Chark Surface (A12) Other (Explain in Remarks) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Well Alay (LRR P, T, U) Sandy Mucky Mineral (S1) (LRR O, S) Setrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	Black H	Histic (A3)		Loamy	Mucky Min	eral (F1) (LRR	O)	Reduced Vertic (F18) (outside MLRA 150A,			
Organic Bodies (A6) (LRR P, T, U) Setrictive Layer (if observed): Type: Degleted Dark Surface (F6) Set Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Depleted Dark Surface (F7) Red Parent Material (TF2) Wery Shallow Dark Surface (TF12) Other (Explain in Remarks) 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) Dark Surface (S7) (LRR P, S, T, U) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Piedmarks: Hydric Soil Present? Yes No X	Hydrog	en Sulfide (A4)		Loamy	Gleyed Ma	atrix (F2)		Piedmont Floodp	lain Soils (F19) (LRR P, S,			
5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Sestrictive Layer (if observed): Type: Depth (inches): Depleted Dark Surface (F7) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Inon-Manganese Masses (F12) (LRR O, P, T) SIndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Inon-Manganese Masses (F12) (LRR P, T, U) Depleted Doric (F13) (LRR P, T, U) SIndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. SINDICATE (F17) (MLRA 151) SINDICATE (F17) (MLRA 151) Anomalous Bright Loamy Soils (F20) (MLRA 149A) SINDICATE (F12) Other (Explain in Remarks) Other (Explain in Remarks) SINDICATE (F12) Other	Stratified Layers (A5) Depleted Matrix (F3)											
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 (S7) (LRR P, S, T, U) Setrictive Layer (if observed): Type: Depth (inches): Marl (F10) (LRR U) Marl (F10) (LRR U) 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 p	_ ·	` , `			Dark Surfa	ice (F6)		(MLRA 153B)				
1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Destrictive Layer (if observed): Type: Depth (inches): Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Depleted Ochric (F11) (MLRA 151) Depleted Ochric (F11) (MLRA 151) Service (A12) Umbric Surface (F13) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Pleta 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) Peta Ochric (F17) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Peta Ochric (F17) (MLRA 150A, 150B) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D) Peta Ochric (F17) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Peta Ochric (F17) (MLRA 150A, 150B) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D) Peta Ochric (F17) (MLRA 150A, 150B) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D) Peta Ochric (F17) (MLRA 150A, 150B) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D) Peta Ochric (F17) (MLRA 150A, 150B) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D) Peta Ochric (F17) (MLRA 150A, 150B) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D) Peta Ochric (F17) (MLRA 150A, 150B) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D) Peta Ochric (F17) (MLRA 150A, 150B) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D) Peta Ochric (F17) (MLRA 150A, 150B) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D) Peta Ochric (F17) (MLRA 150A, 150B) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D) Peta Ochric (F17) (MLRA 150A, 150B) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D)				· — ·		. ,			` ,			
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) Dark Surface (S7) (LRR P, S, T, U) Depth (inches): Depth dochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Iron-Manganese Masses (F12) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Peled Chric (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: Depth (inches): Hydric Soil Present? Yes No X		` , `	•		•	,		<u> </u>	, ,			
Thick Dark Surface (A12)		. ,			, ,	•		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) Setrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X			ce (A11)		•	, ,	•	3				
Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sindy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Sestrictive Layer (if observed): Type: Depth (inches): 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) Hydric Soil Present? Yes No X		` ,			U	, , ,		-,-,-,				
Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Setrictive Layer (if observed): Type: Depth (inches): Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Hydric Soil Present? Yes No X		` ,	•	<i>'</i>	,	, .	(U)	, , , , , , , , , , , , , , , , , , , ,				
Sandy Redox (S5)	_ ′	, ,	(LKK U, S)		,		0A 4E0B)					
Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) setrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X semarks:		• ,			•	* -	· ·					
Dark Surface (S7) (LRR P, S, T, U) estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X emarks:					•	,	,	A 153C 153D)				
estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X emarks:		,	S T III	Anoma	ilous brigin	Loanly Solis (I	20) (WERA 148	ж, 1330, 1330)				
Type: Hydric Soil Present? Yes NoX emarks:	Daik 0	unace (or) (LIGIT),	3, 1, 3,									
Depth (inches): NoX emarks:	estrictive	Layer (if observed)	:									
emarks:	Туре:											
	Depth (ir	nches):					Hydrid	Soil Present? Yes _	NoX			
positive indication of hydric soils was observed.	emarks:											
positive indication of nydric soils was observed.		indination of building	-:									
	o positive	indication of hydric s	oiis was ob	servea.								

Project/Site:	Bluewater SPM		County:	Nueces	Sampling Date:	January 30, 2019		
Applicant/Owner:	Lloyd Er	gineering	Stat	e: Te	exas Sample Point:	DPA029_PEM		
Investigator(s):	E. Munscher and	J. Mitchell	Section, Township	o, Range:	N/A	N/A		
Landform (hillslope, terra	ace, etc.): Marsh,	Saltwater	Local relief (conca	ave, convex, none	e): <u>Concave</u> Slop	oe (%):0-5		
Subregion (LRR or MLR	A): <u>No</u>	one	Lat:27.8	51410 Long	g: <u>-97.068099</u>	Datum: North American Datum 1983		
Soil Map Unit Name:	Mustang fine sand, 0 to 1 pe	ercent slopes, occasio			NWI Classification:	N/A		
Are climatic / hydrologic	conditions on the site typical for	r this time of year?	(Yes / No)	<u>No</u> (i	f no, explain in Remarks.)		
	No ,Soil No ,or Hydro		-		cumstances" present? \			
Are Vegetation	No ,Soil No ,or Hydro	logy No natura	ally problematic?	(If nee	ded, explain any answers	s in Remarks.)		
SUMMARY OF FI	NDINGS - Attach site	map showing s	ampling poin	t locations, t	transects, importa	int features, etc.		
Hydrophytic Vegetation Hydric Soil Present? Wetland Hydrology Pre	Yes X		Is the Samp within a We		Yes <u>X</u>	No		
Remarks:								
	ermined to be within a wetland on the second second in the second second in the second	·		ria.				
HYDROLOGY								
Wetland hydrolog	y Indicators:				Secondary Indicators (min	imum of two required)		
Primary Indicators (minimum of one is required; ch	neck all that apply)			Surface Soil Cracks	, ,		
X Surface Wate	, ,	Aquatic Fauna	, ,	_	X Sparsely Vegetated	` ,		
High Water T	, ,		(B15) (LRR U)	_	Drainage Patterns (·		
Saturation (A	•	X Hydrogen Sulf	` ,		Moss Trim Lines (B	·		
Water Marks	, ,		ospheres on Living	Roots(C3)	Dry-Season Water 1	, ,		
Sediment De	. , ,		Reduced Iron (C4)		Crayfish Burrows (C	*		
Drift Deposits Algal Mat or	, ,	Thin Muck Sui	eduction in Tilled S	Olis (CO)	Geomorphic Position	n Aerial Imagery (C9)		
Iron Deposits	, ,	X Other (Explain	, ,	_	Shallow Aquitard (D	, ,		
	isible on Aerial Imagery (B7)	_X Other (Explain	i iii rtemantoj	_	X FAC-Neutral Test (D	·		
l —	ed Leaves (B9)			_	Sphagnum moss (D	·		
	. ,			_		, , ,		
Field Observations:								
Surface Water Present	? Yes <u>X</u> No	Depth (inche	es): 5					
Water Table Present?		X Depth (inche						
Saturation Present?		X Depth (inche	es): <u>>20</u>	Wetland Hydro	logy Present? Yes _	No		
(includes capillary fring	e) Data (stream gauge, monitorir	ng well, aerial photos,	previous inspection	ns), if available:				
Remarks:								
A positive indication	n of wetland hydrology was obs	erved (at least one pr	rimary indicator).					
A positive indication	n of wetland hydrology was obs	erved (at least two se	econdary indicators).				
Other: Adventitious	roots.							

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft.)	% cover	Species?	Status	Number of Dominant Species	
1 Name Observed					That Are OBL, FACW, or FAC: 2 (A))
2.					(,,	
3					Total Number of Dominant	
					Species Across All Strata: 2 (B)	
4					Opecies Across Air Strata.	
5.					Described Description Control	
6		0	T-1-1-0		Percent of Dominant Species	(D)
			= Total Cover		That Are OBL, FACW, or FAC: (A/	В)
	50% of total cover:	0	20% of total cover:	0	Prevalence Index Worksheet:	
Sapling Stratum (Plot size:	30 ft.)					
1. None Observed					Total % Cover of: Multiply by:	-
2					OBL species115 x 1 =115	-
3					FACW species 0 x 2 = 0	_
4					FAC species 0 x 3 = 0	_
5			·		FACU species 0 x 4 = 0	_
6					UPL species 0 x 5 = 0	_
		0	= Total Cover		Column Totals:115 (A)115	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:					Prevalence Index = B/A = 1.00	
1. None Observed	,					-
_					Hydrophytic Vegetation Indicators:	
					1 - Rapid Test for Hydrophytic Vegetation	
3					X 2 - Dominance Test is >50%	
4						
5.					X 3 - Prevalence Index is ≤ 3.0 ¹	
6					Problematic Hydrophytic Vegetation ¹ (Explain)	
			= Total Cover			
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
Spartina spartinae		70	Yes	OBL	Definitions of Five Vegetation Strata:	
2. Distichlis spicata		30	Yes	OBL	Tree - Woody plants, excluding woody vines,	
3. Borrichia frutescens		10	No	OBL	approximately 20 ft (6m) or more in height and 3 in.	
4. Eleocharis minima		5	No	OBL	(7.6 cm) or larger in diameter at breast height (DBH).	
5.						
6.					Sapling - Woody plants, excluding woody vines,	
7					approximately 20 ft (6 m) or more in height and less	
					than 3 in. (7.6 cm) DBH.	
8					,	
9					Shrub - Woody plants, excluding woody vines,	
10	 .				approximately 3 to 20 ft (1 to 6 m) in height.	
11		445			Sept. Samuelory of to 20 ft (1 to 0 m) in noight.	
			= Total Cover		Herb - All herbaceous (non-woody) plants, including	
	50% of total cover:	57.5	20% of total cover:	23	, ,,,,	
Woody Vine Stratum (Plot size:	30 ft.)				herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2					3 ft (1 m) in height.	
3						
4					Woody vine - All woody vines, regardless of height.	
5.						
		0	= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
	•	-			Present? Yes X No	
					<u> </u>	
Remarks: (if observed, list mo	ornhological adaptati	one below)			
itemarks. (ii Observed, list mo	n pri ological adaptati	OLIS DEIOW	<i>)</i> .			
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	species index	ked as OBL, FACW, or FAC).	

Depth	Matrix			Redox I	Features			
inches)_	Color (moist)		Color (moist)	%_	Type ¹	Loc ²	Texture	Remarks
0-16	10YR 5/1_	98_	10YR 4/6	_2_	C	M	Sandy Clay	
					·			
Type: C=Cc	oncentration, D=Dep		educed Matrix I	 //S=Maske	ed Sand Grains	² I ocation: PI	 L=Pore Lining, M=Matı	ix
	Indicators: (Appl					Location: 11		lematic Hydric Soils ³ :
Histosol	,	ioubio to un i	•		Surface (S8) (L	RRS T III	1 cm Muck (A9	
	pipedon (A2)				e (S9) (LRR S,		2 cm Muck (A1	•
	istic (A3)				neral (F1) (LRR			: (F18) (outside MLRA 150A, I
	en Sulfide (A4)			Gleyed M		. •,		dplain Soils (F19) (LRR P, S, 1
	d Layers (A5)			-	, ,		· 	
		D T 11\		ed Matrix (. ,			ght Loamy Soils (F20)
	Bodies (A6) (LRR I			Dark Surfa			(MLRA 153B)	(TEO)
	ucky Mineral (A7) (L				urface (F7)		Red Parent Ma	
	resence (A8) (LRR			Depression				ark Surface (TF12)
	uck (A9) (LRR P, T)			10) (LRR	•	-4\	Other (Explain	in Remarks)
	d Below Dark Surfa	ce (A11)			(F11) (MLRA 1	-	31	the december of the second
	ark Surface (A12)			-	Masses (F12)			f hydrophytic vegetation and ology must be present,
	rairie Redox (A16) (•			F13) (LRR P, T	, U)	,	bed or problematic.
	Mucky Mineral (S1) ((LRR O, S)		•	7) (MLRA 151)			'
	Gleyed Matrix (S4)			,	F18) (MLRA 15	•		
X Sandy F	Redox (S5)		Piedm	ont Floodp	lain Soils (F19)	(MLRA 149A)		
Stripped	l Matrix (S6)		Anoma	alous Brigh	it Loamy Soils (I	F20) (MLRA 149	A, 153C, 153D)	
Dark Su	rface (S7) (LRR P,	S, T, U)						
Deptii (iiit	ches):					liyanc	John resent: Tes	X No
Remarks:						· '		
nacitiva ina	lication of budgio aci	il waa ahaamu	ام					
positive inc	lication of hydric soi	ii was observe	eu.					

Project/Site:		Bluewater SPM		County:	Nueces	Sampling	Date: Ja	anuary 30, 2019
Applicant/Owner:		Lloyd Eng	gineering				Point:	•
Investigator(s):	E. Munsche	er and	J. Mitchell	Section, Townsh	ip, Range:		N/A	
Landform (hillslope, terr			irie	Local relief (cond	cave, convex, non	ne): Convex	Slope (%):	0-5
Subregion (LRR or MLF	kA):	No	ne	Lat:27.	851076 Lor	ng: <u>-97.06840</u>	5 Datum	: North American Datum 1983
Soil Map Unit Name:	Mustang f	ine sand, 0 to 1 pe	rcent slopes, occasi	ionally flooded, free	quently ponded	NWI Classification:		N/A
Are climatic / hydrologic	conditions or	ւ the site typical for	this time of year?	(Yes / No)	No	(if no, explain in Re	marks.)	
Are Vegetation	No,Soil	,or Hydrol		-		rcumstances" prese		
Are Vegetation	No,Soil	No ,or Hydrol	ogy No natu	rally problematic?	(If ne	eded, explain any a	inswers in Rer	narks.)
SUMMARY OF F	INDINGS -	- Attach site r	nap showing s	sampling poi	nt locations,	transects, im	portant fe	atures, etc.
Hydrophytic Vegetatio	n Present?	Yes X	No					
Hydric Soil Present?	TT TOOOTIC.	Yes			pled Area			
Wetland Hydrology Pr	esent?	Yes		within a W	-	Yes	No	X
, 3,							_	
Remarks:								
This point was det	ermined not to	be within a wetlar	nd due to the lack of	hvdric soils and w	etland hydrology.			
'				,	, 3,			
The survey area w	as determined	d to be wetter than	normal at the time of	of survey.				
HYDROLOGY								
Wetland hydrolog	y Indicators	:				Secondary Indicato	rs (minimum o	of two required)
Primary Indicators	(minimum of a	one is required: ch	eck all that apply)		-	Surface Soil		Tiwo required)
Surface Wa	•	2110 10 10 quii 0 u, 011	Aquatic Faun	a (B13)			, ,	ve Surface (B8)
High Water	` ,	-	 -	s (B15) (LRR U)	·-	Drainage Pat		(-0)
Saturation (-		lfide Odor (C1)	-	 Moss Trim Li		
Water Mark	•	-		zospheres on Livin	g Roots(C3)		Nater Table (0	C2)
Sediment De	eposits (B2)		Presence of F	Reduced Iron (C4)		Crayfish Burr	ows (C8)	
Drift Deposit	:s (B3)		Recent Iron R	Reduction in Tilled	Soils (C6)	Saturation Vi	sible on Aerial	I Imagery (C9)
Algal Mat or	Crust (B4)		Thin Muck Su	urface (C7)		Geomorphic	Position (D2)	
Iron Deposit	s (B5)		Other (Explain	n in Remarks)		Shallow Aqui	tard (D3)	
Inundation \	isible on Aeria	al Imagery (B7)				FAC-Neutral	Test (D5)	
Water-Stain	ed Leaves (B	9)				Sphagnum m	noss (D8) (LRF	₹ T, U)
Field Observations:								
Surface Water Presen			Depth (inch	<i>'</i> ——				
Water Table Present?			Depth (inch	·	Made all librate		W	N. V
Saturation Present? (includes capillary fring	Yes ne)	NoX	Lepth (Inch	nes): <u>>20</u>	wetiand Hydr	rology Present?	Yes	NoX
· · · · · ·	,	n gauge monitorin	g well, aerial photos,	nrevious inspecti	l ons) if available:			
Booting Hoodide	r Data (otroan	r gaago, momonii	g Woll, dorlar priotoo,	, proviodo moposti	one), ii avallabio.			
Remarks:								
No positive indicat	on of wetland	hydrology was ob	served.					

Sampling Point: DPA030_U	
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		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft)	% cover	Species?		Number of Dominant Species	
4. Name Observed		70 0010.	<u> </u>	- Clarao	·	Δ)
					// // // CBE, ///CVV, G////C.	',
2			· 		Total Number of Deminent	
3						٥١
4					Species Across All Strata.	رد)
5			· · · · · · · · · · · · · · · · · · ·		Bound (Boule at Occiden	
6			T-1-1-0		·	A (D)
			= Total Cover		That Are OBL, FACW, or FAC: 67% (A	√B)
	50% of total cover:	0	20% of total cover:	0	Provalence Index Workshoot	
Sapling Stratum (Plot size:	<u>30 ft.</u>)					
1. None Observed						_
2						_
3			·			_
4					FAC species 35 x 3 = 105	_
5					FACU species 0 x 4 = 0	_
6					UPL species 45 x 5 =225	_
		0	= Total Cover		Column Totals:120 (A)410	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = 3.42	
1. None Observed						
2.					Hydrophytic Vegetation Indicators:	
3.			·		1 - Rapid Test for Hydrophytic Vegetation	
4.					X 2 - Dominance Test is >50%	
5.					3 - Prevalence Index is ≤ 3.0 ¹	
6.			-			
0		0	= Total Cover	Number of Dominant Species		
	50% of total cover:			0	1 Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)		2070 Of total cover.			
Muhlenbergia schreberi	<u> </u>	25	Voc	EAC	·	
Andropogon glomeratus		40			_	
3. Opuntia engelmannii		10				
4. Bothriochloa ischaemum		25			(7.6 cm) or larger in diameter at breast height (DBH).	
5. Ambrosia psilostachya		10			Sanling Woody plants, excluding woody vines	
6. Heterotheca subaxillaris		10	No	UPL		
7						
8					than 3 in. (7.6 cm) DBH.	
9						
10						
11					approximately 3 to 20 π (1 to 6 m) in height.	
		120	= Total Cover			
	50% of total cover:	60	20% of total cover:	24	, ,,,	
Woody Vine Stratum (Plot size:	30 ft.)					
1. None Observed					plants, except woody vines, less than approximately	
2					3 ft (1 m) in height.	
3						
4.					Woody vine - All woody vines, regardless of height.	
5.						
		0	= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
	•		•		-	
Remarks: (if observed, list mo	orphological adaptati	ons below) <u>.</u>		1	
•						
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	species index	ked as OBL, FACW, or FAC).	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. D=Cocation: PL=Pore Lining, M=Matrix.	Depth	Matrix			Redox F	eatures				
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Pydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (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 O) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 1: Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P) Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) Organic Bodies (A6) (LRR P, T, U) Pepleted Dark Surface (F7) Red Presence (A8) (LRR U) Redox Depressions (F8) Very Shallow Dark Surface (TF12) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Marl (F10) (LRR P, T, U) Oepleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR P, T, U) Wetand Mydrology must be present, unless disturbed or problematic. Sandy Mucky Mineral (S1) (LRR O, S) Sandy Mucky Mineral (S1) (LRR O, S) Piedmont Floodplain Soils (F19) (MLRA 149A) Sandy Redox (S5) Piedmont Floodplain Soils (F20) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Popth (inches): Hydric Soil Present? Yes No X	•	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Depleted Dark Surface (F6) Muck Presence (A8) (LRR P, T) Depleted Below Dark Surface (A12) Loamy Mucky Mineral (F1) (LRR U) Depleted Below Dark Surface (F6) Thin Dark Surface (F6) Marl (F10) (LRR P) Marl (F10) (LRR U) Depleted Dark Surface (F7) Marl (F10) (LRR U) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Indicators for Problematic Hydric Soils 3 Indicators for Problematic Hydric Soils 3 Indicators for Problematic Hydric Soils 3 In m Muck (A9) (LRR O, S) Reduced Vertic (F18) (uLRR O, S) Mard (F10) (LRR O, S) Sindy Mucky Mineral (S1) (LRR P, T, U) Depleted Dark Surface (F6) Murka 153B) Marl (F10) (LRR U) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Wetland hydrology must be present, unless disturbed or problematic. Wetland hydrology must be present, unless disturbed or problematic. Murka 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes NoX	0-16	10YR 4/3	100	None				Sandy Loam		
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) Histic Epipedon (A2) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Depleted Dark Surface (F6) Muck Presence (A8) (LRR P, T, U) 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 Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes NoX										
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) Histic Epipedon (A2) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Depleted Dark Surface (F6) Muck Presence (A8) (LRR P, T, U) 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 Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes NoX										
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) Histosol (A2) Thin Dark Surface (S9) (LRR S, T, U) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Depleted Dark Surface (F6) 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 Gleyed Matrix (S4) Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Redox Depleted Dark Surface (F13) (MLRA 150B) Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Poletia Ochric (F18) (MLRA 150B) Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Indicators for Problematic Hydric Soils 3 Indicators for Problematic Hydric Soils 3 Indicators for Problematic Hydric Soils 3 In m Muck (A9) (LRR O, 1 cm Muck (A9) (LRR O, Reduced Vertic (F18) (MLRA 5. Anomalous Bright Loamy Soils (F20) Met (F18) (dutside MLRA 19 Anomalous Bright Loamy Soils (F20) Met (H10) (LRR O, MLRA 153B) Reduced Vertic (F13) (MLRA 151) Tinch Muck (A9) (LRR P, T, U) Mari (F10) (LRR U) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Umbric Surface (F13) (LRR P, T, U) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A), 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X										
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) Histic Epipedon (A2) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Depleted Dark Surface (F6) Muck Presence (A8) (LRR P, T) Depleted Below Dark Surface (A11) Tinck Dark Surface (A11) Tinck Dark Surface (A11) Tinck Dark Surface (A11) Tinck Dark Surface (A11) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes NoX										
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) Histic Epipedon (A2) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Depleted Dark Surface (F6) Muck Presence (A8) (LRR P, T) Depleted Below Dark Surface (A11) Tinck Dark Surface (A11) Tinck Dark Surface (A11) Tinck Dark Surface (A11) Tinck Dark Surface (A11) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes NoX										
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) Histic Epipedon (A2) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Depleted Dark Surface (F6) Muck Presence (A8) (LRR P, T) Depleted Below Dark Surface (A11) Tinck Dark Surface (A11) Tinck Dark Surface (A11) Tinck Dark Surface (A11) Tinck Dark Surface (A11) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes NoX										
Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR P, T, U) Depleted Dark Surface (F7) Anomalous Bright Loamy Soils (F20) 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) Detail Cohric (F17) (MLRA 150A) Sandy Redox (S5) Detail Cohric (F17) (MLRA 150A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Redox Dark Surface (S9) (LRR S, T, U) Depleted Matrix (S6) Dark Surface (A12) Loamy Mucky Mineral (S1) (LRR O, S) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Type: Depth (inches): Type: Depth (inches):	Type: C=C	oncentration, D=De	pletion, RM	=Reduced Matrix, I	MS=Masked	d Sand Grains.	² Location: P	L=Pore Lining, M=Matrix	ζ.	
Histic Epipedon (A2) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 18 Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P 18) Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F6) Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Redox Depressions (F8) 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) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (If observed): Type: Depth (inches): Thin Dark Surface (S9) (LRR S, T, U) Piedmont Floodplain Soils (F19) (LRR O, P, T) Reduced Vertic (F18) (MLRA 150A) Loamy Mucky Mineral (S1) (LRR O, P, T) Depleted Bolw Dark Surface (A12) Umbric Surface (F13) (LRR O, P, T) Delta Ochric (F17) (MLRA 151) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (If observed): Type: Depth (inches): Hydric Soil Present? Yes No X	lydric Soils	s Indicators: (Appl	licable to a	II LRRs, unless o	therwise n	oted.)		Indicators for Proble	ematic Hydric Soils ³ :	
Black Histic (A3)	Histoso	ol (A1)		Polyva	alue Below	Surface (S8) (L	RR S, T, U)	1 cm Muck (A9)	(LRR O)	
Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A7) Organic Bodies (A6) (LRR P, T, U) Bedox Dark Surface (F6) Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, T) Redox Dark Surface (F6) Muck Presence (A8) (LRR U) Redox Depressions (F8) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Jepleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Wetland hydrology must be present, unless disturbed or problematic. Reduxed Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	Histic E	Epipedon (A2)		Thin D	ark Surface	e (S9) (LRR S,	T, U)	2 cm Muck (A10) (LRR S)	
Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Dark Surface (F7) 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 Redox (S5) Sandy Redox (S5) Delta Ochric (F18) (MLRA 150A, 150B) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Anomalous Bright Loamy Soils (F20) (MLRA 151) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) In Cash Cash Cash Cash Cash Cash Cash Cash	Black F	Histic (A3)		Loamy	Mucky Mir	eral (F1) (LRR	(O)	Reduced Vertic	(F18) (outside MLRA 150A	
Organic Bodies (A6) (LRR P, T, U) Som Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Redox Depressions (F8) Marl (F10) (LRR U) Depleted Dorki (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Wetland hydrology must be present, unless disturbed or problematic. Reduced Vertic (F18) (MLRA 150A, 150B) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	Hydrog	en Sulfide (A4)		Loamy	Gleyed Ma	atrix (F2)		Piedmont Flood	olain Soils (F19) (LRR P, S,	
5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Dark Surface (F7) Marl (F10) (LRR U) Depleted Dark Surface (F7) 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) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Depleted Dark Surface (F7) Red Parent Material (TF2) Very Shallow Dark Surface (F12) Other (Explain in Remarks) Incon-Manganese Masses (F12) (LRR O, P, T) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (MLRA 150A) Marl (F10) (MLRA 150A) Marl (F10) (MLRA 150A) Marl (F10) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Wetland hydrology must be present, unless disturbed or problematic. Anomalous Bright Loamy Soils (F19) (MLRA 149A) Marl (F10) (MLRA 149A) Marl (F10) (MLRA 150A) Marl (F10) (MLRA 150A) Marl (F10) (MLRA 151) Marl (F10) (MLRA 150A) Molicators of hydrology must be present, unless disturbed or problematic. Marl (F10) (MLRA 150A) Marl (F10) (MLRA 150A) Marl (F10) (MLRA 150B) Marl (F10) (MLRA 150B) Marl (F10) (MLRA 150B) Marl (F10) (MLRA 1	Stratifie	ed Layers (A5)		Deplet	ted Matrix (I	=3)		Anomalous Brigh	nt Loamy Soils (F20)	
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 (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depleted Ox Depressions (F8) Wery Shallow Dark Surface (TF12) Other (Explain in Remarks) In Coast Prairie (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) In Coast Prairie (F13) (ILR P, T, U) In Coast Prairie (F1	Organi	c Bodies (A6) (LRR	P, T, U)	Redox	Dark Surfa	ice (F6)		(MLRA 153B)		
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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Depleted Ochric (F11) (MLRA 151) Restrictive Layer (if observed): Type: Depth (inches): Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) 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) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes NoX	5 cm M	lucky Mineral (A7) (L	RR P, T, U) Deplet	ted Dark Su	rface (F7)		Red Parent Mate	erial (TF2)	
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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Wetland hydrology must be present, wetland hydrology must be present, unless disturbed or problematic. Method CF17) (MLRA 151) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes NoX	Muck F	Presence (A8) (LRR	U)	Redox	Depression	ns (F8)		Very Shallow Da	rk Surface (TF12)	
Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Iron-Manganese Masses (F12) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) 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. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic.	1 cm M	luck (A9) (LRR P, T)	Marl (I	=10) (LRR I	J)		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) Restrictive Layer (if observed): Type: Depth (inches): Umbric Surface (F13) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Meduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	Deplete	ed Below Dark Surfa	ice (A11)	Deplet	ted Ochric (F11) (MLRA 1	51)			
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) Restrictive Layer (if observed): Type: Depth (inches): 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) Hydric Soil Present? Yes No X	Thick D	Dark Surface (A12)		Iron-M	langanese I	Masses (F12) ((LRR O, P, T)			
Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F1/) (MLRA 151) Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A)	Coast F	Prairie Redox (A16)	(MLRA 150	A) Umbri	c Surface (F	13) (LRR P, T	, U)	•		
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Park Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	Sandy	Mucky Mineral (S1)	(LRR O, S)	Delta	Ochric (F17) (MLRA 151)		uniess disturb	ed of problematic.	
Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes NoX	Sandy	Gleyed Matrix (S4)		Reduc	ed Vertic (F	18) (MLRA 15	0A, 150B)			
Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	Sandy	Redox (S5)		Piedm	ont Floodpl	ain Soils (F19)	(MLRA 149A)			
Restrictive Layer (if observed): Type:	Strippe	d Matrix (S6)		Anoma	alous Bright	Loamy Soils (F	F20) (MLRA 14 9	9A, 153C, 153D)		
Type:	Dark S	urface (S7) (LRR P,	S, T, U)							
Type:) 4 ml - 4 li	I (if abaamaa)	<u> </u>							
Depth (inches): NoX		Layer (If observed)):							
Pomorko:	Depth (in	nches):					Hydric	; SOIL PRESENT? TES NO X		
	Domorko:									
Cellidins.	Kemarks:									

Project/Site:	Bluewater SPM	Count	y: Nuece	es Samplin	ng Date: January 30, 2019
Applicant/Owner:	Lloyd Engine	ering	State:	Texas Sample	Point: DPA031_PEM
Investigator(s):	E. Munscher and	J. Mitchell Section	on, Township, Range:		N/A
Landform (hillslope, terrac	e, etc.): Marsh, Saltv	vater Local	relief (concave, convex	x, none): Concave	Slope (%):0-5
Subregion (LRR or MLRA): None	L	at: 27.851250	Long: <u>-97.0673</u>	Datum: North American Datum 198
Soil Map Unit Name:	Mustang fine sand, 0 to 1 percer	nt slopes, occasionally t	looded, frequently pond	led NWI Classificatio	n: N/A
Are climatic / hydrologic co	onditions on the site typical for this	,	/ No) <u>No</u>		•
	Soil No, or Hydrology			nal Circumstances" pres	
Are Vegetation No.	Soil No, or Hydrology	No naturally pro	oblematic?	(If needed, explain any	answers in Remarks.)
SUMMARY OF FIN	DINGS - Attach site ma	p showing samp	ling point location	ons, transects, ir	nportant features, etc.
Hydrophytic Vegetation F Hydric Soil Present? Wetland Hydrology Prese	Yes X		is the Sampled Area within a Wetland?	Yes <u>X</u>	No
Remarks:					
·	nined to be within a wetland due t	·			
HYDROLOGY					
Wetland hydrology					tors (minimum of two required)
	ninimum of one is required; check				il Cracks (B6)
X Surface Water	· ·	_ Aquatic Fauna (B13)			egetated Concave Surface (B8)
High Water Ta	· '	Marl Deposits (B15)			atterns (B10)
Saturation (A3 Water Marks (_ Hydrogen Sulfide Oc	es on Living Roots(C3)		Lines (B16) n Water Table (C2)
Sediment Dep		Presence of Reduce	- , ,	Crayfish Bu	, ,
Drift Deposits	· '	Recent Iron Reduction	, ,		Visible on Aerial Imagery (C9)
Algal Mat or C	· · —	Thin Muck Surface (c Position (D2)
Iron Deposits (· ·	Other (Explain in Re	•	Shallow Aq	, ,
	ble on Aerial Imagery (B7)	_	a	X FAC-Neutra	, ,
Water-Stained	, ,				moss (D8) (LRR T, U)
	,				
Field Observations:					
Surface Water Present?	Yes <u>X</u> No	Depth (inches):	4		
Water Table Present?	Yes NoX	Depth (inches):	>20		
Saturation Present?	Yes NoX	_ Depth (inches):	>20 Wetland	Hydrology Present?	Yes X No
(includes capillary fringe) Describe Recorded [Data (stream gauge, monitoring we	ell, aerial photos, previo	us inspections), if availa	able:	
Remarks:					
rtomanto.					
A positive indication	of wetland hydrology was observe	d (at least one primary	indicator).		
A positive indication	of wetland hydrology was observe	d (at least two seconda	ry indicators).		
i .					

Times Estatum			Absolute	Dominant	Indicator	Dominance Test worksheet:	
1. None Observed	Tree Stratum (Plot size:	30 ft.)	% cover	Species?		Number of Dominant Species	
2 Total Number of Dominant Species Across All Strata:	1 Nama Ohaaniad					·	(A)
1							()
Species Across All Stratus Species Across All Stratus Species Across All Stratus Species S						Total Number of Dominant	
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)							(B)
Percent of Dominant Species That Arro OBL FACW, or FAC 100% (AB)						Species / toross / tir otrata.	(5)
That Are OBL, FACW, or FAC:						Persont of Dominant Species	
Spaining Stratum (Plot size: 30 ft.) Total cover: 0 20% of total cover: 0 Pravalence Index Worksheet: Total % Cover of:	0			- Total Cover		•	(A/D)
1. None Observed		500/ aftatal assum			0	That Are OBL, FACW, OF FAC.	(A/D)
Total % Cover of:	O and line of Other transport (Distriction			20% of total cover:		Prevalence Index Worksheet	
2 Should Stratum (Plot size: 30 ft.) Shrubs	· · · · · · · · · · · · · · · · · · ·	30 π)					
3.							
FAC species 10	2						
FACU species O						· — — — — — — — — — — — — — — — — — — —	
Column Totals Column Total							
Column Totals: 75 (A) 95 (B)	5						
Solid Stratum Foliation Schinus terebinthificial 10 Yes FAC	6						
Stratum (Plot size: 30 ft.)						Column Totals: (A)	(B)
Schinus terebinthifolia 10 Yes FAC Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2			0	20% of total cover:	0		
2. 3. 4. 4. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5.	Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = 1.27	
3. 1- Rapid Test for Hydrophytic Vegetation 1- Rapid Test for Hy	1. Schinus terebinthifolia		10	Yes	FAC		
3. 1- Rapid Test for Hydrophytic Vegetation 1- Rapid Test for Hy	2					Hydrophytic Vegetation Indicators:	
\$\frac{1}{5}\$.	3					1 - Rapid Test for Hydrophytic Vegetation	
\$\frac{1}{6}\$. \\ \frac{1}{10} = Total Cover \\ \frac{1}{5}\$ \text{of total cover:} \\ \frac{5}{5}\$ \text{of total cover:} \\ \frac{2}{5}\$ \text{of total cover:} \text{of total cover:} \text{of total cover:} \t						X 2 - Dominance Test is >50%	
Problematic Hydrophytic Vegetation (Explain) Problematic Hydrophytic Vegetation (Explain)						X 3 - Prevalence Index is ≤ 3.0 ¹	
10				·		Problematic Hydrophytic Vegetation ¹ (Explain)	
Sow of total cover: 5 20% of total cover: 2 1 1 1 1 2 2 2 2 30 ft. 1 1 2 2 30 ft. 1 2 30 ft. 1 2 30 ft. 1 30 7 2 30 ft. 1 30 7 2 30 ft. 1 30 7 30 5 30 7 30 30 7 30 30 7 30 30			10	= Total Cover			
Herb Stratum (Plot size: 30 ft.) 1. Borrichia frutescens		50% of total cover:			2	¹ Indicators of hydric soil and wetland hydrology must	
1. Borrichia frutescens 15 Yes OBL 2. Typha latifolia 15 Yes OBL 3. Spartina spartinae 30 Yes OBL 4. Schoenoplectus pungens 5 No OBL 5. Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 30 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine - All woody vines, regardless of height. Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) DBH. Sapling - Woody plants, excluding woody vines, approximately 3 ft (2 m) or more in height and in diameter at breast height (DBH). Sapling - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, regardless of height. Woody vine - All woody vines, regardless of height. Woody vine - All woody vines, regardless of height. Yes	Herb Stratum (Plot size:						
2. Typha latifolia 3. Spartina spartinae 4. Schoenoplectus pungens 5 No OBL 5 No OBL 6. Sapling - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine - All woody vines, regardless of height. Woody vine - All woody vines, regardless of height. Hydrophytic Vegetation Present? Yes X No Remarks: (if observed, list morphological adaptations below). A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).	· —	,	15	Yes	OBI		
3. Spartina spartinae 3. Spartina spartinae 3. Spartina spartinae 4. Schoenoplectus pungens 5. No OBL 6. Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. 7. Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. 7. Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. 7. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody Vine - All woody vines, regardless of height. Woody vine - All woody vines, regardless of height. Woody vine - All woody vines, regardless of height. Phydrophytic Vegetation Present? Yes X No Remarks: (if observed, list morphological adaptations below). A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).						_	
4. Schoenoplectus pungens 5 No OBL (7.6 cm) or larger in diameter at breast height (DBH). 5. 6. 5. 6. 5. 6. 5. 6. 5. 6. 5. 6. 5. 6. 5. 6. 5. 6. 5. 6. 5. 6. 5. 6. 5. 6. 5. 6. 6. 5. 6. 6. 6. 5. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6.							
5							
Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Woody Vine Stratum (Plot size: 30 ft.) None Observed None Observed Description of total cover: 0 20% of total cover: 0 4 Woody vines, regardless of height. Remarks: (if observed, list morphological adaptations below). A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).					ODL	(7.0 cm) of larger in diameter at breast height (DBH).	
approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Woody Vine Stratum (Plot size: 30 ft.) None Observed None Observed Description: One Total Cover of total cover: 0 20% of total cover: 0 20% of total cover: 0 4 4 4 4 5 4 5 4 5 4 5 4 5 4 5 4 5 4 5						Sapling - Woody plants, excluding woody vines	
8							
9							
10						tian 5 in. (7.0 cm) DBH.	
11						Shrub Woody plants, avaluding woody vines	
Solve of total cover: 32.5 20% of total cover: 13	10						
Solition Stratum Solition Stratum Solition Stratum Solition Stratum Solition Stratum Solition Stratum Solition Soli	11					approximately 3 to 20 ft (1 to 6 ff) iff height.	
None Observed None Observe						Hards All back and the second for a second by a back a few backs are	
1. None Observed 2		50% of total cover:	32.5	20% of total cover:	13	, ,,,,	
2	Woody Vine Stratum (Plot size:	30 ft.)					
3	1. None Observed						
4	2					3 ft (1 m) in height.	
4	3						
Remarks: (if observed, list morphological adaptations below). A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).	4					Woody vine - All woody vines, regardless of height.	
So% of total cover: 0 20% of total cover: 0 Vegetation Present? Yes X No	5						
Remarks: (if observed, list morphological adaptations below). A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).			0	= Total Cover		Hydrophytic	
Remarks: (if observed, list morphological adaptations below). A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).		50% of total cover:	0	20% of total cover:	0	Vegetation	
A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).						Present? Yes X No	
A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).							
	Remarks: (if observed, list mo	orphological adaptat	ions below).			
	A positive indication of hydron	hytic vegetation :::s	observed	(>50% of dominant	enaciae index	ved as OBL_EACW_or EAC\	
A positive indication of hydrophytic vegetation was observed (Prevalence Index is < 3.00\	A positive indication of hydrop	nyuc vegetation was	opserved	(~ 50 % OF GOTHINANTS	sheries iliaex	as ode, i movv, oi FMOJ.	
	A nositive indication of hydron	hytic vegetation was	heerved	(Prevalence Index is	s < 3 NO)		

Depth	Matrix			Redox F	eatures			
inches)	Color (moist)	%	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks
0-16	10YR 4/1	97	10YR 4/6	_3_	C	M	Sandy Clay	Shell hash and gravel mixed
								with matrix
	Concentration, D=Dep					² Location: Pl	 _=Pore Lining, M=N	•
•	s Indicators: (Appl	icable to a	•		,			roblematic Hydric Soils ³ :
Histoso	` '				Surface (S8) (L			(A9) (LRR O)
	Epipedon (A2)				e (S9) (LRR S,	• •		(A10) (LRR S)
	Histic (A3)			-	neral (F1) (LRR	0)		ertic (F18) (outside MLRA 150A,E
·	gen Sulfide (A4)			Gleyed Ma	` ,			loodplain Soils (F19) (LRR P, S, T
	ed Layers (A5)	D T II)		ed Matrix (,			Bright Loamy Soils (F20)
<u> </u>	c Bodies (A6) (LRR			Dark Surfa	, ,		(MLRA 153	
	Mucky Mineral (A7) (L		· — ·	ed Dark Su	, ,			Material (TF2)
	Muck Presence (A8) (LRR U)			Redox Depressions (F8) Marl (F10) (LRR U)				w Dark Surface (TF12)
	fluck (A9) (LRR P, T)			, ,	•	:4)	Other (Expl	ain in Remarks)
	ed Below Dark Surfa	ce (ATT)	<u> </u>	,	[F11) (MLRA 15 Masses (F12) (,	³ Indicator	s of hydrophytic vegetation and
	Dark Surface (A12) Prairie Redox (A16)	/MI DA 450		•	F13) (LRR P, T,			nydrology must be present,
	Mucky Mineral (S1)	•	· —	•	') (MLRA 151)	o)	unless di	sturbed or problematic.
	Gleyed Matrix (S4)	(LKK 0, 3)		•	7 (WLKA 131) =18) (MLRA 15 0	0A 150B)		
	Redox (S5)			,	ain Soils (F19)	•		
	ed Matrix (S6)				, ,	•	A, 153C, 153D)	
	urface (S7) (LRR P,	S, T, U)		ilous brigin	Learny Cons (1	20) (III.L. 140	A, 1000, 100D)	
Restrictive	Layer (if observed)	:						
Type:								
Depth (ir	nches):					Hydric	Soil Present? Y	es <u>X</u> No
Remarks:						I		
A positive in	idication of hydric so	il was obser	ved.					

Project/Site:	Bluewater SPM	Co	ounty:	Nueces	Sampling I	Date: Ja	anuary 30, 2019
Applicant/Owner:	Lloyd Enginee		Stat		Texas Sample P		DPA032 U
··· ———			ection, Township	o, Range:	·	N/A	
Landform (hillslope, terrace, et	tc.): Prairie	Lo	ocal relief (conca	ave, convex, non	ie): None	Slope (%):	0-5
Subregion (LRR or MLRA):	None		_ Lat:27.8	51403 Lon	ng: <u>-97.067430</u>) Datum:	North American Datum 1983
Soil Map Unit Name: Mu	stang fine sand, 0 to 1 percent	t slopes, occasiona	lly flooded, frequ	ently ponded	NWI Classification:		N/A
Are climatic / hydrologic condit	ions on the site typical for this	time of year? (Yes / No)	No	(if no, explain in Rer	narks.)	
Are Vegetation No	,Soil Yes ,or Hydrology		-	Are "Normal Cir	rcumstances" preser	nt? Yes	X No
Are Vegetation No	,Soil No, or Hydrology	No naturally	problematic?	(If ne	eded, explain any ar	nswers in Rem	narks.)
SUMMARY OF FINDIN	NGS - Attach site map	showing sar	npling poin	t locations,	transects, imp	ortant fea	atures, etc.
			1				
Hydrophytic Vegetation Prese	ent? Yes	NoX					
Hydric Soil Present?	Yes	No X	Is the Samp	led Area			
Wetland Hydrology Present?	 -	No X	within a We		Yes	No	
Remarks:							
This point was determined	d not to be within a wetland du	e to the lack of all	hree wetland cr	teria.			
The survey area was dete	ermined to be wetter than norn	nal at the time of su	ırvey.				
HYDROLOGY							
Wetland hydrology Indi	cators:				Secondary Indicator	s (minimum of	f two required)
Primary Indicators (minim	num of one is required; check a	all that apply)			Surface Soil C	Cracks (B6)	
Surface Water (A1)	· —	Aquatic Fauna (B	13)	-	Sparsely Vege	etated Concav	ve Surface (B8)
High Water Table ((A2)	Marl Deposits (B		-	Drainage Patt		
Saturation (A3)		Hydrogen Sulfide	, ,	-	Moss Trim Lir	, ,	
Water Marks (B1)		Oxidized Rhizosp	_	Roots(C3)	Dry-Season V	Vater Table (C	(2)
Sediment Deposits	(B2)	Presence of Red	uced Iron (C4)	-	Crayfish Burro	ows (C8)	
Drift Deposits (B3)		Recent Iron Redu	ction in Tilled S	oils (C6)	Saturation Vis	ible on Aerial	Imagery (C9)
Algal Mat or Crust ((B4)	Thin Muck Surface	ce (C7)	-	Geomorphic F	Position (D2)	
Iron Deposits (B5)		Other (Explain in	Remarks)	_	Shallow Aquit	ard (D3)	
Inundation Visible of	on Aerial Imagery (B7)			_	FAC-Neutral	Γest (D5)	
Water-Stained Lea	ves (B9)			-	Sphagnum mo	oss (D8) (LRF	t T, U)
Field Observations:							
	Yes No X	Depth (inches):	N/A				
	Yes No X	,					
l	Yes No X	Depth (inches):		Wetland Hydr	ology Present?	Yes	No X
(includes capillary fringe)		2 3 4 11 (11.01.03).					
Describe Recorded Data	(stream gauge, monitoring we	II, aerial photos, pre	evious inspection	ns), if available:			
				•			
Remarks:							
No positive indication of v	vetland hydrology was observe	ed.					

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft.)	% cover	Species?	Status	Number of Dominant Species	
1 Name Observed					•	(A)
2.			·			,
3					Total Number of Dominant	
4.						В)
					opeoles / loross / lil ottata.	ری,
5.					Percent of Dominant Species	
6		0	= Total Cover		·	A/B)
	500/ of total covers		•	0	That Ale OBL, FACW, OI FAC	A(D)
Carling Charles (Distains	50% of total cover:	0	20% of total cover:	0	Prevalence Index Worksheet:	
Sapling Stratum (Plot size:	30 ft.)					
1. None Observed			· · · · · · · · · · · · · · · · · · ·		Total % Cover of: Multiply by:	_
2.			· — ·		OBL species 20 x 1 = 20	_
3.					FACW species	_
4			<u> </u>		FAC species 15 x 3 = 45	_
5					FACU species 45 x 4 = 180	
6			<u> </u>		UPL species 0 x 5 = 0	
			= Total Cover		Column Totals: 80 (A) 245	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = 3.06	
1. Schinus terebinthifolia		15	Yes	FAC		
2	.		. <u> </u>		Hydrophytic Vegetation Indicators:	
3			. <u> </u>		1 - Rapid Test for Hydrophytic Vegetation	
4					2 - Dominance Test is >50%	
5					3 - Prevalence Index is ≤ 3.0 ¹	
6.					Problematic Hydrophytic Vegetation ¹ (Explain)	
		15	= Total Cover			
	50% of total cover:	7.5	20% of total cover:	3	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)		•		be present, unless disturbed or problematic.	
1. Cynodon dactylon		30	Yes	FACU	Definitions of Five Vegetation Strata:	
2. Borrichia frutescens		10	No	OBL	Tree - Woody plants, excluding woody vines,	
Spartina spartinae		10	No	OBL	approximately 20 ft (6m) or more in height and 3 in.	
Schizachyrium scoparium		15	Yes	FACU	(7.6 cm) or larger in diameter at breast height (DBH).	
		10	103	17100	(7.0 om) of larger in diameter at breast neight (BBH).	
5					Sapling - Woody plants, excluding woody vines,	
6					approximately 20 ft (6 m) or more in height and less	
7. _Q					than 3 in. (7.6 cm) DBH.	
8						
9					Shrub - Woody plants, excluding woody vines,	
10			<u> </u>		approximately 3 to 20 ft (1 to 6 m) in height.	
11	 .	65				
			= Total Cover	40	Herb - All herbaceous (non-woody) plants, including	
	50% of total cover:	32.5	20% of total cover:	13	herbaceous vines, regardless of size, and woody	
Woody Vine Stratum (Plot size:	<u>30 ft.</u>)				plants, except woody vines, less than approximately	
1. None Observed			·		3 ft (1 m) in height.	
2					3 it (1 iii) iii fieigiit.	
3					Manager of height	
4					Woody vine - All woody vines, regardless of height.	
5			·			
		0	= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes NoX	
Remarks: (if observed, list mo	orphological adaptati	ons below).			
No positive indication of hydro	phytic vegetation wa	s observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).	
, .,,	. , 5		,		,	

Profile Description: (Describe to the	e depth needed t		e indicator or c	onfirm the abs	ence of indicators	.)
Depth Matrix	Color (mo			Loc ²	Toyturo	Pomorko
(inches) Color (moist) 9		oist) <u>%</u>	Type ¹	LOC	Texture	Remarks
0-16 2.5Y 6/3 9	_				Sandy Clay	Dual Matrix
0-16 5BG 7/1 1	None None				Sandy Clay	Disturbed Soils
			-			
¹ Type: C=Concentration, D=Depletion				² Location: P	L=Pore Lining, M=N	•
Hydric Soils Indicators: (Applicable			-			roblematic Hydric Soils ³ :
Histosol (A1)		Polyvalue Below	Surface (S8) (L	RR S, T, U)	1 cm Muck	(A9) (LRR O)
Histic Epipedon (A2)		Thin Dark Surfac	e (S9) (LRR S,	T, U)	2 cm Muck	(A10) (LRR S)
Black Histic (A3)		Loamy Mucky Mi	, , ,	(O)	Reduced Ve	ertic (F18) (outside MLRA 150A,B
Hydrogen Sulfide (A4)		Loamy Gleyed M	atrix (F2)		Piedmont F	loodplain Soils (F19) (LRR P, S, T
Stratified Layers (A5)		Depleted Matrix ((F3)		Anomalous	Bright Loamy Soils (F20)
Organic Bodies (A6) (LRR P, T,	J)	Redox Dark Surf	ace (F6)		(MLRA 153	B)
5 cm Mucky Mineral (A7) (LRR P	, T, U)	Depleted Dark Si	urface (F7)		Red Parent	Material (TF2)
Muck Presence (A8) (LRR U)		Redox Depression	ons (F8)		Very Shallo	w Dark Surface (TF12)
1 cm Muck (A9) (LRR P, T)		Marl (F10) (LRR	U)		Other (Expl	ain in Remarks)
Depleted Below Dark Surface (A	11)	Depleted Ochric	(F11) (MLRA 1	51)		
Thick Dark Surface (A12)		Iron-Manganese	Masses (F12)	LRR O, P, T)		s of hydrophytic vegetation and
Coast Prairie Redox (A16) (MLR	A 150A)	Umbric Surface (F13) (LRR P, T	, U)		nydrology must be present,
Sandy Mucky Mineral (S1) (LRR	O, S)	Delta Ochric (F17	7) (MLRA 151)		uniess di	sturbed or problematic.
Sandy Gleyed Matrix (S4)		Reduced Vertic (F18) (MLRA 15	0A, 150B)		
Sandy Redox (S5)		Piedmont Floodp	lain Soils (F19)	(MLRA 149A)		
Stripped Matrix (S6)		Anomalous Brigh	t Loamy Soils (20) (MLRA 14	9A, 153C, 153D)	
Dark Surface (S7) (LRR P, S, T,	U)					
Depth (inches):					c Soil Present? Y	es No X
Remarks:						
No positive indication of hydric soils w	as observed.					
Soils highly disturbed due to nearby ro	ad and house.					

Project/Site:	Bluewater SPM		County:	Nueces	Sampling	Date: Janu	uary 30, 2019
Applicant/Owner:	Lloyd Eng	gineering	Sta				DPA033 U
•		J. Mitchell	Section, Township	ip, Range:	<u> </u>	N/A	
Landform (hillslope, terrace,		irie	Local relief (cond		one): None	Slope (%):	0-5
Subregion (LRR or MLRA):			Lat: 27.8			_	North American Datum 1983
Soil Map Unit Name:		m clay loam, rarely fl			NWI Classification:		EM1Ch
Are climatic / hydrologic con				No	 (if no, explain in Re	marks.)	
					— Circumstances" prese	ent? Yes X	. No
Are Vegetation No	,Soil No ,or Hydrol	ogy No natur	ally problematic?	(If	needed, explain any a	answers in Rema	rks.)
SUMMARY OF FIND		man showing s	ampling poi	nt location	e transacte im	nortant foat	uras atc
- COMMINIANT OF THE	Attach Site i	nap snowing s	amping pon	it location.	, transects, iii	portant reat	
Hydrophytic Vegetation Pre							
Hydric Soil Present?	YesX	No	Is the Sam	oled Area			
Wetland Hydrology Presen	nt? Yes	NoX	within a We	etland?	Yes	_ No	_X
Remarks:							
This point was determine	ned not to be within a wetlar	nd due to the lack of	wetland hydrology	-			
·			, ,,				
The survey area was d	letermined to be wetter than	normal at the time of	f survey.				
,			•				
LIVEROL COV							
HYDROLOGY Wetland hydrology In					0 1 1 1 1 1		
					Secondary Indicato		wo required)
	nimum of one is required; ch		(D40)		Surface Soil		O(DO)
Surface Water (A	·	Aquatic Fauna	, ,			getated Concave	Surface (B8)
High Water Tabl	• •		(B15) (LRR U)		Drainage Pa		
Saturation (A3)	41	Hydrogen Sulf	, ,	Poets(C2)	Moss Trim Li	, ,	`
Water Marks (B1	•		ospheres on Living	g Roots(C3)		Water Table (C2))
Sediment Depos			leduced Iron (C4)	2-il- (OC)	Crayfish Buri	, ,	(00)
Drift Deposits (B	•		eduction in Tilled S	Solis (Cb)		isible on Aerial Im	agery (C9)
Algal Mat or Crus	· · ·	Thin Muck Su	, ,			Position (D2)	
Iron Deposits (B	•	Other (Explain	in Remarks)		Shallow Aqui	, ,	
	e on Aerial Imagery (B7)				X FAC-Neutral		F 10
Water-Stained L	eaves (D9)				Spriagnum n	noss (D8) (LRR T	, U)
Field Observations:							
Surface Water Present?	Yes No)	C Depth (inche	es): N/A				
Water Table Present?		Depth (inche	· 				
Saturation Present?		Depth (inche	<i>'</i> ——	Wetland Hy	drology Present?	Yes	No X
(includes capillary fringe)	100 110	Bopai (mone	56). <u> </u>	Woulding 119	arology i rocom.		<u> </u>
Describe Recorded Da	ta (stream gauge, monitorin	g well, aerial photos.	previous inspection	ns). if available):		
20001120 1 10001 404 24	ta (on oant gaago, monton	g men, dendi prietes,	p. o v. o do moposti.	,,	•		
Remarks:							
No positive indication o	of wetland hydrology was ob	served.					
1							

Sampling Point:	DPA033 U
Carripining i Cirit.	D: A000_0

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:30	ft.)	% cover	Species?	Status	Number of Dominant Species	
1. None Observed					' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	(A)
2.						` ,
3.					Total Number of Dominant	
4.					Species Across All Strata: 4	(B)
5.						
6.					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC: 75%	(A/B)
50°	% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:30	ft)				Prevalence Index Worksheet:	
1. None Observed					Total % Cover of: Multiply by:	
2.					OBL species 35 x 1 = 35	
3					FACW species 10 x 2 = 20	
4					FAC species 45 x 3 = 135	
5					FACU species 0 x 4 = 0	
6					UPL species 15 x 5 = 75	
	_	0	= Total Cover		Column Totals:105 (A)265	(B)
509	% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size: 30	ft)				Prevalence Index = B/A = 2.52	
1. Schinus terebinthifolia		25	Yes	FAC		
2. Prosopis glandulosa		10	Yes	UPL	Hydrophytic Vegetation Indicators:	
3					1 - Rapid Test for Hydrophytic Vegetation	
4					X 2 - Dominance Test is >50%	
5					X 3 - Prevalence Index is ≤ 3.0 ¹	
6					Problematic Hydrophytic Vegetation ¹ (Explain)	
		35	= Total Cover			
509	% of total cover:	17.5	20% of total cover:	7	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size: 30	ft)				be present, unless disturbed or problematic.	
Spartina spartinae		25	Yes	OBL	Definitions of Five Vegetation Strata:	
2. Borrichia frutescens		10	No	OBL	Tree - Woody plants, excluding woody vines,	
3. Muhlenbergia schreberi		20	Yes	FAC	approximately 20 ft (6m) or more in height and 3 in.	
4. Andropogon glomeratus		10	No	FACW	(7.6 cm) or larger in diameter at breast height (DBH).	
5. Opuntia engelmannii		5	No	<u>UPL</u>		
6					Sapling - Woody plants, excluding woody vines,	
7					approximately 20 ft (6 m) or more in height and less	
8					than 3 in. (7.6 cm) DBH.	
9					Chrub Waady plants avaluding waady vines	
10					Shrub - Woody plants, excluding woody vines,	
11					approximately 3 to 20 ft (1 to 6 m) in height.	
	-	70	= Total Cover		Herb - All herbaceous (non-woody) plants, including	
	% of total cover:	35	20% of total cover:	14	herbaceous vines, regardless of size, and woody	
Woody Vine Stratum (Plot size:	30 ft.)				plants, except woody vines, less than approximately	
1. None Observed					3 ft (1 m) in height.	
2					on (1 m) in neight.	
3	•				Woody vine - All woody vines, regardless of height.	
4					Woody vine - All woody vines, regardless of fleight.	
5	-		T + 1 0			
		0	= Total Cover	0	Hydrophytic	
500	% of total cover:	0	20% of total cover:	0	Vegetation Vegetation	
					Present? Yes <u>X</u> No	
Remarks: (if observed, list morph	ological adaptation	ons below).			
A positive indication of hydrophytic	c vegetation was	observed	(>50% of dominant	species index	xed as OBL, FACW, or FAC).	

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

epth	Matrix			Redox F	eatures					
nches)	Color (moist) %		Color (moist) % Type ¹ Loc ²			Texture	Remarks			
0-6	10YR 4/3	100	None	<u> </u>			Sandy Clay			
6-16	10YR 5/1	90	10YR 5/8	_10_	C	M	Sandy Clay			
			——————————————————————————————————————			21				
	Concentration, D=Dep					Location. Pi	L=Pore Lining, M=Matrix	ematic Hydric Soils ³ :		
	rdric Soils Indicators: (Applicable to all Li Histosol (A1)				Surface (S8) (L	RRSTU)	1 cm Muck (A9)	•		
Histic Epipedon (A2)					e (S9) (LRR S ,		2 cm Muck (A10	•		
Black Histic (A3) Loamy Mucky Miner			. , .	•	(F18) (outside MLRA 150A,I					
	Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)				,	Piedmont Floodplain Soils (F19) (LRR P, S, T)				
	Stratified Layers (A5) Depleted Matrix (F3)					Anomalous Brigh	nt Loamy Soils (F20)			
Organic Bodies (A6) (LRR P, T, U)			Redox	Redox Dark Surface (F6)				(MLRA 153B)		
5 cm l	Mucky Mineral (A7) (L	.RR P, T, I	J) Deplete	Depleted Dark Surface (F7)				Red Parent Material (TF2)		
Muck	Presence (A8) (LRR	U)	Redox	Depressior	ns (F8)		Very Shallow Dark Surface (TF12)			
1 cm l	Muck (A9) (LRR P, T)		Marl (F	10) (LRR l	J)		Other (Explain in Remarks)			
Deple	ted Below Dark Surfa	ce (A11)	Deplete	ed Ochric (F11) (MLRA 1 5	51)	2			
	Dark Surface (A12)			•	Masses (F12) (T) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present,			
	Prairie Redox (A16)	•	· —	,	13) (LRR P, T	U)		ed or problematic.		
	/ Mucky Mineral (S1)	(LRR O, S		•) (MLRA 151)					
	Sandy Gleyed Matrix (S4)			Reduced Vertic (F18) (MLRA 150A, 150B)						
	/ Redox (S5)	· · · · · · · · · · · · · · · · · · ·								
	ed Matrix (S6)	0 T III	Anoma	lous Bright	Loamy Soils (F	·20) (MLRA 149	IA, 153C, 153D)			
Dark s	Surface (S7) (LRR P,	S, I, U)								
estrictive	Layer (if observed)	:								
Type:										
	inches):					Hydric	Soil Present? Yes	X No		
. (,		_				-			
emarks:										

Project/Site:	Blue	water SPM		County:	Nueces		Sampling Date:	January 30, 2019
Applicant/Owner:		Lloyd Engineer	ring	S	ate:	Texas	Sample Point:	DPA034_PEM
Investigator(s):	E. Munscher	and .	J. Mitchell	Section, Towns	nip, Range:		N/A	
Landform (hillslope, terra	ace, etc.):	Marsh, Saltwa	iter	Local relief (cor	cave, convex,	none):(Concave Slope	e (%):0-5
Subregion (LRR or MLR	A):	None		Lat:27	.854145	Long:	-97.071263 [Datum: North American Datum 1983
Soil Map Unit Name:	Mustang fine s	and, 0 to 1 percent	slopes, occasio	nally flooded, fre	quently ponded	d_ NWI Cla	ssification:	N/A
Are climatic / hydrologic	conditions on the	site typical for this	time of year?	(Yes / No)	No	(if no, ex	plain in Remarks.)	
Are VegetationI	No,SoilNo	,or Hydrology	No signifi	cantly disturbed	Are "Normal	l Circumstan	ces" present? Ye	esX No
Are VegetationI	No,SoilNo	,or Hydrology	No natura	ally problematic?	(I1	f needed, ex	plain any answers	in Remarks.)
SUMMARY OF FI	NDINGS - At	tach site map	showing s	ampling po	nt location	ns, transe	ects, importa	nt features, etc.
Hydrophytic Vegetatior Hydric Soil Present? Wetland Hydrology Pre	Y	'es <u>X</u>	No No No	Is the San	=	Yes	sX!	No
Pomorko:								
Remarks: This point was dete			·		teria.			
HYDROLOGY								
Wetland hydrolog	y Indicators:		<u> </u>		<u></u>	Seconda	ry Indicators (minir	mum of two required)
Primary Indicators	(minimum of one i	s required; check a	ll that apply)			Su	ırface Soil Cracks	(B6)
X Surface Wat	er (A1)	_X_	Aquatic Fauna	(B13)		Sp	parsely Vegetated (Concave Surface (B8)
High Water ⁻	Γable (A2)		Marl Deposits	(B15) (LRR U)		Dr	ainage Patterns (B	510)
Saturation (A	٦3)	_X_	Hydrogen Sulfi	ide Odor (C1)		Mo	oss Trim Lines (B1	6)
Water Marks	, (B1)		Oxidized Rhizo	spheres on Livir	g Roots(C3)	Dr	y-Season Water T	able (C2)
Sediment De	posits (B2)		Presence of Re	educed Iron (C4)		Cr	ayfish Burrows (C8	3)
Drift Deposit	s (B3)		Recent Iron Re	eduction in Tilled	Soils (C6)	Sa	aturation Visible on	Aerial Imagery (C9)
Algal Mat or	Crust (B4)		Thin Muck Sur	face (C7)		Ge	eomorphic Position	(D2)
Iron Deposits	s (B5)	_X_	Other (Explain	in Remarks)		Sh	nallow Aquitard (D3	5)
Inundation V	isible on Aerial Im	agery (B7)				_ X _ FA	AC-Neutral Test (D	5)
Water-Staine	ed Leaves (B9)					Sp	ohagnum moss (D8	i) (LRR T, U)
Field Observations:								
Surface Water Present	-	No	Depth (inche	· ——				
Water Table Present?	Yes		Depth (inche					
Saturation Present? (includes capillary fring	Yes	No X	Depth (inche	es): >20	Wetland H	ydrology P	resent? Yes	XNo
Describe Recorded	•	uge, monitoring well	l, aerial photos,	previous inspect	ons), if availab	le:		
Remarks:								
A positive indication	n of wetland hydro	ology was observed	(at least one pr	imary indicator).				
Other: Adventitious	roots							
Outor. / tavoritations	10010.							

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft.)	% cover	Species?	Status	Number of Dominant Species	
1 Nama Observad					That Are OBL, FACW, or FAC: 2	A)
2.						
3.					Total Number of Dominant	
4					Species Across All Strata: 2 (i	B)
5			<u> </u>			
6			<u> </u>		Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC: 100% (A	A/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1. None Observed			<u> </u>		Total % Cover of: Multiply by:	_
2.			· —		OBL species 90 x 1 = 90	_
3.					FACW species 0 x 2 = 0	_
4			· —		FAC species 15 x 3 = 45	_
5			·		FACU species 0 x 4 = 0	_
6					UPL species	— _(D)
	500/ aftatal accom		= Total Cover	0	Column Totals: (A) 135	(B)
Shrub Stratum (Plot size:	50% of total cover: 30 ft.)		20% of total cover:		Prevalence Index = B/A = 1.29	
1. Schinus terebinthifolia	<u> 30 II.</u>)	15	Voc	EAC	Frevalence index – B/A – 1.29	_
		15	<u>Yes</u>	FAC	Hydrophytic Vegetation Indicators:	
					1 - Rapid Test for Hydrophytic Vegetation	
3 4					X 2 - Dominance Test is >50%	
5.					$\overline{\mathbf{X}}$ 3 - Prevalence Index is $\leq 3.0^{1}$	
6.					Problematic Hydrophytic Vegetation ¹ (Explain)	
•-		15	= Total Cover			
	50% of total cover:		20% of total cover:	3	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:					be present, unless disturbed or problematic.	
1. Typha latifolia	<u> </u>	15	No	OBL	Definitions of Five Vegetation Strata:	
2. Borrichia frutescens		10	No	OBL	Tree - Woody plants, excluding woody vines,	
3. Distichlis spicata		50	Yes	OBL	approximately 20 ft (6m) or more in height and 3 in.	
4. Spartina spartinae		15	No	OBL	(7.6 cm) or larger in diameter at breast height (DBH).	
5			. <u> </u>			
6			. <u>———</u>		Sapling - Woody plants, excluding woody vines,	
7			<u> </u>		approximately 20 ft (6 m) or more in height and less	
8			<u> </u>		than 3 in. (7.6 cm) DBH.	
9			· ——		Shrub - Woody plants, excluding woody vines,	
10			<u> </u>		approximately 3 to 20 ft (1 to 6 m) in height.	
11			T-1-1-0		approximately 5 to 20 ft (1 to 6 ff) iff fleight.	
	500/ - 54-4-1	90	= Total Cover	40	Herb - All herbaceous (non-woody) plants, including	
Manda Vina Chrotana (Distance	50% of total cover:	45	20% of total cover:	18	herbaceous vines, regardless of size, and woody	
Woody Vine Stratum (Plot size: 1. None Observed	. <u>30 II.</u>)				plants, except woody vines, less than approximately	
	-				3 ft (1 m) in height.	
2 3	•					
4.					Woody vine - All woody vines, regardless of height.	
5						
o	-		= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes X No	
Remarks: (if observed, list m	orphological adaptati	ons below).			
A nositive indication of hydrox	abytic vegetation was	oheerved	(>50% of dominant	enaciae indo	xed as OBL, FACW, or FAC).	
A positive indication of hydrop	ony no vogotation was	, opaci veu	1. 00 % of dominalit	opooles illue)	AND GO ODE, I MOVY, OI I AOJ.	

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

SOIL

Sampling Point: DPA034_PEM

Depth Matrix Redox Features	
1 Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 2 Location: PL=Pore Lining, M=Matrix. 1 Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) 1 Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) 1 Histosol (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR O) 1 Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (LR O) 2 Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loam (MLRA 153B) 3 Tom Muck Wilneral (A7) (LRR P, T, U) Depleted Dark Surface (F6) (MLRA 153B) 4 Tom Muck (A9) (LRR P, T) Redox Derpessions (F8) Very Shallow Dark Surface (A11) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) 5 Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) 5 Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Piedmont Floodplain Soils (F19) (MLRA 149A) 5 Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Thick Dark Surface (S7) (LRR P, S, T, U) 7 Restrictive Layer (if observed): 7 Type: Depth (inches): Hydric Soil Present? Yes X	Remarks
¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix. Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic I Histosol (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 O Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (O Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain So Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loam Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) (MLRA 153B) Strom Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF Muck Presence (A8) (LRR U) Redox Depressions (F8) Very Shallow Dark Surface 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Other (Explain in Remar Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Other (Explain in Remar Locast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Wetland hydrology mu unless disturbed or pr X Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 150A) Hy	
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histic Epipedon (A2) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Depleted Matrix (F3) Loamy Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F6) Muck Presence (A8) (LRR P, T, U) Depleted Dark Surface (F7) Marl (F10) (LRR U) Depleted Below Dark Surface (F7) Marl (F10) (LRR U) Depleted Below Dark Surface (F12) (LRR O, P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sardy Redox (S5) Sardy Redox (S5) Derived Watrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Memarks:	
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Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (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 O) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (O Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soi Anomalous Bright Loam (MLRA 153B) Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loam (MLRA 153B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F6) (MLRA 153B) 6 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Redox Depressions (F8) Very Shallow Dark Surface (A11) Depleted Deriv (F11) (MLRA 151) Tinck Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F13) (MLRA 151) Sandy Mucky Mineral (S1) (LRR O, S) Piedmont Floodplain Soils (F19) (MLRA 149A) Sandy Redox (S5) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Depth (inches): Midicators of Problematic In cm Muck (A9) (LRR O, P, T) Undicators of hydrophydr	
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Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	
Histosol (A1)	
Histic Epipedon (A2) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (O Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF 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) Stripped Matrix (S6) Dark Surface (S9) (LRR S, T, U) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F3) Red Parent Material (TF Red Parent Material (TF Red Parent Material (TF Natl (F10) (LRR U) Depleted Delow Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) X Sandy Gleyed Matrix (S4) Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Reduced Vertic (F18) (MLRA 150A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X Remarks:	•
Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (O Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soi Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loam 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 (TF Muck Presence (A8) (LRR U) Redox Depressions (F8) Very Shallow Dark Surfac 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Other (Explain in Remar Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Sandy Mucky Mineral (S1) (LRR O, S) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A), 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X Remarks:	•
Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Bedox Dark Surface (F6) (MLRA 153B) Red Parent Material (TF Red Parent Material (TF Muck Presence (A8) (LRR U) Redox Depressions (F8) Very Shallow Dark Surface Other (Explain in Remar Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) X Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X Remarks:	•
Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stom Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Dark Surface (F7) Marl (F10) (LRR U) Depleted Delto Ochric (F11) (MLRA 151) 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 (F17) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Mand (F10) (LRR U) Depleted Dark Surface (F7) Red Parent Material (TF (MLRA 1518) Poepleted Dark Surface (F7) Red Parent Material (TF (MLRA 151) Poepleted Dark Surface (F11) (MLRA 151) Depleted Ochric (F11) (MLRA 151) Jindicators of hydroph wetland hydrology mu unless disturbed or pr Slindicators of hydroph wetland hydrology mu unless disturbed or pr Anomalous Bright Loamy Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Mydric Soil Present? Yes X	
Organic Bodies (A6) (LRR P, T, U) Som Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) 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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Redox Dark Surface (F7) Red Parent Material (TF Very Shallow Dark Surface (F1) Red Parent Material (TF Red Parent M	
5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Dark Surface (S7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF Redox Depressions (F8) Very Shallow Dark Surface Other (Explain in Remar Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Wetland hydrology mu unless disturbed or pr Red Parent Material (TF Redox Depressions (F8) Very Shallow Dark Surface Other (Explain in Remar Iron-Manganese Masses (F12) (LRR O, P, T) Wetland hydrology mu unless disturbed or pr Reduced Vertic (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X Remarks:	ny Soils (F20)
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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depleted Selow Dark Surface (A11) Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Wetland hydrology mu unless disturbed or promote of pr	
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 (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Jeleta Ochric (F13) (LRR P, T, U) Wetland hydrology mu unless disturbed or provided the surface (F13) (LRR P, T, U) Wetland hydrology mu unless disturbed or provided the surface (F13) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X Remarks:	- 2)
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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Wetland hydrology mu unless disturbed or provided in the provid	ace (TF12)
Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) X Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Iron-Manganese Masses (F12) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Wetland hydrology mu unless disturbed or provided in the provided in th	rks)
Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Wetland hydrology muunless disturbed or properties 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) Restrictive Layer (if observed): Type: Depth (inches): 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) Hydric Soil Present? Yes X Remarks:	hytic vegetation and
Sandy Mucky Mineral (S1) (LRR O, S) X Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Depth (inches): Deta Ochric (F1/) (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 X	
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X Remarks:	roblematic.
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X Remarks:	
Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X Remarks:	
Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X Remarks:	
Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X Remarks:	
A positive indication of hydric soil was observed.	

Project/Site:		Bluewater SPM	1	Col	ınty:	Nueces		Sampling [Date: la	nuary 30, 2019
Applicant/Owner:			<u>'</u> Engineering		State		Texas			DPA035_PEM
Investigator(s):	E. Munsc				ction, Township		. chac		N/A	,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Landform (hillslope, terr			n, Saltwater		cal relief (conca	· · · —	one): C	Concave		0-5
Subregion (LRR or MLF			None					-97.072467	Datum:	North American Datum 1983
Soil Map Unit Name:	Mustano	fine sand, 0 to 1	percent slo							N/A
Are climatic / hydrologic	conditions	on the site typica	for this time	e of year? (Y	es / No)	No	(if no, ex	plain in Rem	narks.)	
Are Vegetation	No,Soil_	No ,or Hyd	Irology	No significant	tly disturbed?	Are "Normal (Circumstan	ces" presen	it? Yes	X No
Are Vegetation	No,Soil_	No ,or Hyd	Irology	No naturally ր	oroblematic?	(If r	needed, exp	plain any an	swers in Ren	narks.)
SUMMARY OF F	NDINGS	- Attach sit	e map sl	nowing sam	pling poin	t locations	s, transe	cts, imp	ortant fea	atures, etc.
								•		· ·
Hydrophytic Vogototics	Drocont?	Voc. V	No							
Hydrophytic Vegetation Hydric Soil Present?	i Fiesciii:	Yes X Yes X	No)	Is the Sampl	lad Araa				
Wetland Hydrology Pro	esent?	Yes X)	within a Wet		Yes	X	No	
TVolland Trydrology 1 1	,00111.	100 <u>X</u>		·	Within a viol	iiuiiu i				
Remarks:										
This point was dete	ermined to b	e within a wetlan	d due to the	presence of all	3 wetland criter	ia				
This point was det	ATTIMIOG TO D	o wanin a wodan	a dao to the	procession of all	o wouding officer	ia.				
The survey area w	as determin	ed to be wetter th	nan normal a	at the time of sur	vey.					
HYDROLOGY										
Wetland hydrolog	v Indicator	 's:					Seconda	ny Indicators	(minimum of	f two required)
Primary Indicators			check all th	at apply)				rface Soil C		two required)
X Surface Wa				quatic Fauna (B1	3)				` ,	ve Surface (B8)
High Water				arl Deposits (B1	•			ainage Patte		()
Saturation (, ydrogen Sulfide (ss Trim Lin		
Water Mark	•			xidized Rhizosph		Roots(C3)			/ater Table (C	(2)
Sediment De	eposits (B2)			esence of Redu	ced Iron (C4)		Cra	ayfish Burro	ws (C8)	,
X Drift Deposit	s (B3)		Re	ecent Iron Reduc	ction in Tilled So	oils (C6)	Sa	turation Vis	ible on Aerial	Imagery (C9)
Algal Mat or	Crust (B4)		Th	nin Muck Surface	e (C7)		Ge	omorphic P	osition (D2)	
Iron Deposit	s (B5)		0	ther (Explain in F	Remarks)		Sh	allow Aquita	ard (D3)	
Inundation V	isible on Ae	rial Imagery (B7)					_ X _ FA	C-Neutral T	est (D5)	
Water-Stain	ed Leaves (39)					Sp	hagnum mo	oss (D8) (LRF	t T, U)
Field Observations										
Field Observations:	10 V	V Na		D = = 4h (:= = h = =).						
Surface Water Presen Water Table Present?		X No		Depth (inches): Depth (inches):	<u>4</u> >20					
Saturation Present?	Yes _	No		Depth (inches):		Wetland Hyd	drology Pr	ocont?	Yes X	No
(includes capillary fring				Deput (mones).		Wedana riye	urology i i	CSCIII.	103 <u>X</u>	
Describe Recorded	Data (strea	am gauge, monito	oring well, a	erial photos, prev	ious inspection	ns), if available	e:			
	`				·	•				
Remarks:										
A										
A positive indication	n or wetland	nydrology was d	observed (at	least one primai	ry indicator).					

Sampling Point: DPA035_PEM

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft)	% cover	Species?	Status	Number of Dominant Species	
1. Nana Ohaamad		70 00 001	Орескоз:	Otatus	That Are OBL, FACW, or FAC: 2	(A)
					That Are OBE, I AOW, OF I AO.	(^)
2.					Total Number of Dominant	
3					Species Across All Strata: 2	(B)
4					Species Across Air Strata.	(6)
5					Percent of Dominant Species	
6	-		= Total Cover		That Are OBL, FACW, or FAC: 100%	(A/B)
	50% of total cover:		20% of total cover:	0	That Are OBL, I ACW, OF I AC.	(A/D)
Conling Stratum (Diet size)	50% of total cover:		20% of total cover.	0	Prevalence Index Worksheet:	
Sapling Stratum (Plot size:	30 ft.)					.
1. None Observed						
2					· — — — — — — — — — — — — — — — — — — —	
3						
4					FACU species	
5						
6					UPL species	— _(D)
	500/ 51 1		= Total Cover		Column Totals:(A)(A)	(B)
Objects Objects (District	50% of total cover:		20% of total cover:	0	Branchau Indon B/A	
Shrub Stratum (Plot size:	30 ft.)		.,		Prevalence Index = B/A = 1.29	
		10	Yes	FAC_		
2					Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
4					X 2 - Dominance Test is >50%	
5					X 3 - Prevalence Index is ≤ 3.0 ¹	.
6					Problematic Hydrophytic Vegetation ¹ (Explain))
			= Total Cover			
	50% of total cover:	5	20% of total cover:	2	Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
1. <i>Typha latifolia</i>		15	No	OBL	Definitions of Five Vegetation Strata:	
2. Andropogon glomeratus		10	No	FACW	Tree - Woody plants, excluding woody vines,	
3. Cyperus odoratus		10	No	FACW	approximately 20 ft (6m) or more in height and 3 in.	
4. Spartina spartinae		80	Yes	OBL	(7.6 cm) or larger in diameter at breast height (DBH).	
5. Eleocharis minima		10	No	OBL	One Program Was developed a construction of the construction of	
6. Hydrocotyle umbellata		5	No	OBL	Sapling - Woody plants, excluding woody vines,	
7					approximately 20 ft (6 m) or more in height and less	
8					than 3 in. (7.6 cm) DBH.	
9						
10					Shrub - Woody plants, excluding woody vines,	
11					approximately 3 to 20 ft (1 to 6 m) in height.	
		130	= Total Cover			
	50% of total cover:	65	20% of total cover:	26	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:	30 ft)				herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2					3 ft (1 m) in height.	
3						
4					Woody vine - All woody vines, regardless of height.	
5						
		0	= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes <u>X</u> No	
Remarks: (if observed, list m	orphological adaptati	ons below).			
A positive indication of hydrop	hvtic vegetation was	observed	(>50% of dominant	species index	red as OBL, FACW, or FAC).	
positive indication of hydrop	, 20 10g0 (dioi) Wac	3233170U	, sono s. dominant		, · · · · · · · · · · ·	
A positive indication of hydrop	hytic vegetation was	observed	(Prevalence Index is	s ≤ 3.00)		
,	,		,	,-		

Depth	Matrix			Redox F			ence of indicators.)	
Jeptn inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-16	10YR 5/1	98	10YR 4/6	2	C		Sandy Clay	rtomanto
0 10								
				—.		2		
	oncentration, D=Dep					² Location: P	L=Pore Lining, M=Matr	
•	s Indicators: (Appl	icable to all	•		•			lematic Hydric Soils ³ :
Histosol	, ,				Surface (S8) (L		1 cm Muck (A9	
Histic E	pipedon (A2)				e (S9) (LRR S,	· ·	2 cm Muck (A1	* * * * * * * * * * * * * * * * * * * *
	listic (A3)			-	neral (F1) (LRR	O)		(F18) (outside MLRA 150A,
Hydroge	en Sulfide (A4)		Loamy	Gleyed Ma	atrix (F2)		Piedmont Floor	dplain Soils (F19) (LRR P, S, '
Stratifie	ed Layers (A5)		X Deplete	ed Matrix (F3)		Anomalous Brig	ght Loamy Soils (F20)
Organic	Bodies (A6) (LRR I	P, T, U)	Redox	Dark Surfa	ace (F6)		(MLRA 153B)	
5 cm Mı	ucky Mineral (A7) (L	.RR P, T, U)			ırface (F7)		Red Parent Ma	terial (TF2)
Muck P	resence (A8) (LRR	U)	Redox	Depressio	ns (F8)		Very Shallow D	ark Surface (TF12)
1 cm Mı	uck (A9) (LRR P, T))	Marl (F	10) (LRR	U)		Other (Explain	in Remarks)
Deplete	ed Below Dark Surfa	ce (A11)	Deplete	ed Ochric (F11) (MLRA 1	51)		
Thick D	ark Surface (A12)		Iron-Ma	anganese l	Masses (F12) (LRR O, P, T)		f hydrophytic vegetation and
Coast P	Prairie Redox (A16) ((MLRA 150A	A)Umbric	Surface (I	F13) (LRR P, T	, U)		ology must be present,
Sandy N	Mucky Mineral (S1)	(LRR O, S)	Delta C	Ochric (F17) (MLRA 151)		uniess distur	bed or problematic.
Sandy (Gleyed Matrix (S4)		Reduce	ed Vertic (F	18) (MLRA 15	0A, 150B)		
X Sandy F	Redox (S5)		Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A)		
Stripped	d Matrix (S6)		Anoma	lous Brigh	t Loamy Soils (F	20) (MLRA 14 9	A, 153C, 153D)	
	urface (S7) (LRR P,	S T II)						
	Layer (if observed)	:						
Restrictive L Type: Depth (ind	Layer (if observed)	:				Hydric	: Soil Present? Yes	XNo
Type: Depth (ind	Layer (if observed)	:				Hydric	Soil Present? Yes	X No
Type: Depth (ind	Layer (if observed)	:				Hydrio	: Soil Present? Yes	XNo
Type: Depth (ind	Layer (if observed)	:				Hydrid	: Soil Present? Yes	XNo
Type: Depth (ind	Layer (if observed)	:				Hydrid	: Soil Present? Yes	XNo
Type: Depth (ind	Layer (if observed)	:				Hydrid	Soil Present? Yes	XNo
Type: Depth (ind	Layer (if observed)	:				Hydrid	Soil Present? Yes	XNo
Type: Depth (ind	Layer (if observed)	:				Hydrid	: Soil Present? Yes	XNo
Type: Depth (ind	Layer (if observed)	:				Hydrid	Soil Present? Yes	XNo
Type: Depth (ind	Layer (if observed)	:				Hydrid	Soil Present? Yes	XNo
Type: Depth (ind	Layer (if observed)	:				Hydrid	: Soil Present? Yes	XNo
Type: Depth (ind	Layer (if observed)	:				Hydrid	Soil Present? Yes	X No
Type: Depth (ind	Layer (if observed)	:				Hydrid	: Soil Present? Yes	X No
Type: Depth (ind	Layer (if observed)	:				Hydrid	Soil Present? Yes	X No
Type: Depth (ind	Layer (if observed)	:				Hydrid	Soil Present? Yes	X No
Type: Depth (ind	Layer (if observed)	:				Hydrid	Soil Present? Yes	X No
Type: Depth (ind	Layer (if observed)	:				Hydrid	Soil Present? Yes	X No
Type: Depth (ind	Layer (if observed)	:				Hydrid	Soil Present? Yes	X No
Type: Depth (ind	Layer (if observed)	:				Hydrid	Soil Present? Yes	X No
Type: Depth (ind	Layer (if observed)	:				Hydrid	Soil Present? Yes	X No
Type: Depth (ind	Layer (if observed)	:				Hydrid	Soil Present? Yes	X No
Type: Depth (ind	Layer (if observed)	:				Hydrid	Soil Present? Yes	X No
Type: Depth (ind	Layer (if observed)	:				Hydrid	Soil Present? Yes	X No
Type: Depth (ind	Layer (if observed)	:				Hydrid	Soil Present? Yes	X No
Type: Depth (ind	Layer (if observed)	:				Hydrid	Soil Present? Yes	X No
Type: Depth (ind	Layer (if observed)	:				Hydrid	Soil Present? Yes	X No

Project/Site:	Blue	ewater SPM	(County:	Nueces	Sampling	Date: Ja	anuary 30,	2010
Applicant/Owner:		Lloyd Enginee		Stat			Point:		
Investigator(s):	E. Munscher			Section, Township			N/A	<u> </u>	
Landform (hillslope, ter				Local relief (conca	· · ·	ne): None	Slope (%):		0-5
Subregion (LRR or MLI	· ·	Т				ong:	- ' ' '		
Soil Map Unit Name:		sa <u>nd, 0 to 1 percen</u>				NWI Classification:		N/A	
Are climatic / hydrologic	conditions on the	site typical for this	time of year?	(Yes / No)	No	_ (if no, explain in Re	marks.)		
Are Vegetation	No ,Soil No	o, or Hydrology				ircumstances" prese	nt? Yes	X No	·
Are Vegetation	No Soil No	o, or Hydrology	No natural	lly problematic?	(If ne	eeded, explain any a	nswers in Rem	narks.)	
SUMMARY OF F	INDINGS - Af	ttach site mar	showing sa	ampling poin	t locations	, transects, im	portant fea	atures,	etc.
Γ								-	
Hydrophytic Vegetation	n Drecent?	Yes	No X						
Hydric Soil Present?		Yes	No X	Is the Samp	led ∆rea				
Wetland Hydrology Pi		Yes	No X	within a We		Yes	No	X	
Remarks:									
This point was de	rermined not to be	within a wetland du	ie to the lack of a	II three wetland cr	iteria				
11110 point 1120	Cilimios no. 15 2 2	Within a motoria	ie to the lact of	Turio House	iteria.				
The survey area v	vas determined to	be wetter than norm	nal at the time of	survey.					
,				,					
LIVEROLOGV									
HYDROLOGY Wetland hydrolo	av Indicators:					C		f to a roqui	· = =1\
-		is required; check a	all that annly)			Secondary Indicator Surface Soil (-	two requi	rea)
Surface Wa	•	is required, offect a	Aquatic Fauna (jetated Concav	∕e Surface	(R8)
High Water	` ,		_ Aqualic Fauria (Marl Deposits (E			Sparsely veg Drainage Pat		6 Julia	(50)
Saturation (, ,		Hydrogen Sulfid			Moss Trim Li			
Water Mark				spheres on Living	Roots(C3)		Nater Table (C	22)	
	eposits (B2)		Presence of Rec			Crayfish Burn	•	,	
Drift Depos			-	duction in Tilled S	oils (C6)		sible on Aerial	Imagery (C9)
Algal Mat o	, ,		Thin Muck Surfa		··· (- · /	Geomorphic I			J c,
Iron Deposi			Other (Explain i	, ,		Shallow Aquit			
	√isible on Aerial Im	nagery (B7)	•	•		FAC-Neutral			
	ned Leaves (B9)						oss (D8) (LRR	≀ T, U)	
					-				
Field Observations:									
Surface Water Preser		NoX	- · `	· ——					
Water Table Present?		NoX	Depth (inches	· ——					
Saturation Present? (includes capillary frin	Yes	NoX	_ Depth (inches	s): <u>>20</u>	Wetland Hyd	rology Present?	Yes	_ No	<u>X</u>
	-	itoring we	" photon r		::\ if =: (ailabla)				
Describe Recorde	d Data (stream ga	luge, monitoring wel	il, aeriai priotos, p	revious inspection	is), if available.				
Remarks:									
No positive indica	ion of wetland hyd	drology was observe	ed.						

Sampling Point: DPA036_U

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft \	% cover	Species?	Status	Number of Dominant Species	
4. Name Observation		70 COVE	оресіез:	Otatus	That Are OBL, FACW, or FAC: 2 (A	ر ا ا
					That Ale Obe, I AOW, OI I AO.	''
2.					Total Number of Dominant	
3.						۱
4					Species Across All Strata:4 (E	²⁾
5					Dancout of Dancingut Conscien	
6			- Total Cavar		Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A	\/D\
	500/ - 51-1-1		= Total Cover	0	That Are OBL, FACW, or FAC: (A	VB)
Cardina Chartura (Diataina	50% of total cover:		20% of total cover:		Prevalence Index Worksheet:	
Sapling Stratum (Plot size:	30 ft.)					
1. None Observed					Total % Cover of: Multiply by:	-
2					OBL species <u>25</u> x 1 = <u>25</u>	-
3.					FACW species x 2 =0	-
4					FAC species 20 x 3 = 60	-
5					FACU species 40 x 4 = 160	-
6					UPL species 20 x 5 = 100	
			= Total Cover		Column Totals: (A) 345	_ ^(B)
		0	20% of total cover:	0		
Shrub Stratum (Plot size:	30_ft)				Prevalence Index = B/A = 3.29	_
'		10	Yes	<u>FAC</u>		
2					Hydrophytic Vegetation Indicators:	
3					1 - Rapid Test for Hydrophytic Vegetation	
4					2 - Dominance Test is >50%	
5					3 - Prevalence Index is ≤ 3.0 ¹	
6			<u> </u>		Problematic Hydrophytic Vegetation ¹ (Explain)	
		10	= Total Cover			
	50% of total cover:	5	20% of total cover:	2	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
1. Opuntia engelmannii		20	Yes	UPL	Definitions of Five Vegetation Strata:	
2. Spartina spartinae		25	Yes	OBL	Tree - Woody plants, excluding woody vines,	
3. Schizachyrium scoparium		40	Yes	FACU	approximately 20 ft (6m) or more in height and 3 in.	
4. Helianthus annuus		10	No	FAC	(7.6 cm) or larger in diameter at breast height (DBH).	
5						
6					Sapling - Woody plants, excluding woody vines,	
7					approximately 20 ft (6 m) or more in height and less	
8					than 3 in. (7.6 cm) DBH.	
9						
10.					Shrub - Woody plants, excluding woody vines,	
11.			·		approximately 3 to 20 ft (1 to 6 m) in height.	
		95	= Total Cover			
	50% of total cover:	47.5	20% of total cover:	19	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size	: 30 ft.)				herbaceous vines, regardless of size, and woody	
1 None Observed					plants, except woody vines, less than approximately	
2.			<u> </u>		3 ft (1 m) in height.	
3.			<u> </u>			
4.	<u> </u>		<u> </u>		Woody vine - All woody vines, regardless of height.	
5.			<u> </u>			j
		0	= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
			•		Present? Yes No X	
Remarks: (if observed, list m	orphological adaptat	ions below).			
·			•			
No positive indication of hydro	ophytic vegetation wa	as observe	d (≥50% of dominan	t species ind	exed as FAC- or drier).	

(inches) Color (moist) % Color (moist) % Type¹ Loc 0-16 10YR 5/3 100 None — — — — — — — — — — — — — — — — — — —	Sandy Loam Indicators for Pro 2 cm Muck (A Reduced Vert Piedmont Floo Anomalous Br (MLRA 153B) Red Parent M	blematic Hydric Soils ³ : 9) (LRR O) 10) (LRR S) ic (F18) (outside MLRA 150A, odplain Soils (F19) (LRR P, S, 7) right Loamy Soils (F20)
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Polyvalue Below Surface (S8) (LRR S, T, U) Histosol (A1) Polyvalue Below Surface (S9) (LRR S, T, U) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Stratified Layers (A5) Depleted Dark Surface (F6) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Depressions (F8) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, Sandy Mucky Mineral (S1) (LRR O, S) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 1504) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Loamy Soils (F20) (MLRA 1504) Dark Surface (S7) (LRR P, S, T, U)	ion: PL=Pore Lining, M=Ma Indicators for Pro U)	blematic Hydric Soils ³ : 9) (LRR O) 10) (LRR S) ic (F18) (outside MLRA 150A, odplain Soils (F19) (LRR P, S, 7) right Loamy Soils (F20) laterial (TF2)
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) Black Histic (A3) Hydrogen Sulfide (A4) 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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U)	Indicators for Pro U)	blematic Hydric Soils ³ : 9) (LRR O) 10) (LRR S) ic (F18) (outside MLRA 150A, odplain Soils (F19) (LRR P, S, 7) right Loamy Soils (F20) laterial (TF2)
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) Black Histic (A3) Hydrogen Sulfide (A4) 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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U)	Indicators for Pro U)	blematic Hydric Soils ³ : 9) (LRR O) 10) (LRR S) ic (F18) (outside MLRA 150A, odplain Soils (F19) (LRR P, S, 7) right Loamy Soils (F20) laterial (TF2)
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) Black Histic (A3) Hydrogen Sulfide (A4) 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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U)	Indicators for Pro U)	blematic Hydric Soils ³ : 9) (LRR O) 10) (LRR S) ic (F18) (outside MLRA 150A, odplain Soils (F19) (LRR P, S, right Loamy Soils (F20) laterial (TF2)
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Depleted Matrix (F3) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Muck Presence (A8) (LRR U) Redox Depressions (F8) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150E) Sandy Redox (S5) Piedmont Floodplain Soils (F20) (MLRA 150A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 151)	Indicators for Pro U)	blematic Hydric Soils ³ : 9) (LRR O) 10) (LRR S) ic (F18) (outside MLRA 150A, odplain Soils (F19) (LRR P, S, right Loamy Soils (F20) laterial (TF2)
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 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) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Polyvalue Below Surface (S9) (LRR S, T, U) Loamy Mucky Mineral (F1) (LRR O) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, Umbric Surface (F13) (LRR P, T, U) Sandy Mucky Mineral (S1) (LRR O, S) Sendy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 150A) Anomalous Bright Loamy Soils (F20) (ML	Indicators for Pro U)	blematic Hydric Soils ³ : 9) (LRR O) 10) (LRR S) ic (F18) (outside MLRA 150A, odplain Soils (F19) (LRR P, S, right Loamy Soils (F20) laterial (TF2)
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) Black Histic (A3) Hydrogen Sulfide (A4) 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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U)	Indicators for Pro U)	blematic Hydric Soils ³ : 9) (LRR O) 10) (LRR S) ic (F18) (outside MLRA 150A, odplain Soils (F19) (LRR P, S, right Loamy Soils (F20) laterial (TF2)
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 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) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Polyvalue Below Surface (S9) (LRR S, T, U) Loamy Mucky Mineral (F1) (LRR O) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, Umbric Surface (F13) (LRR P, T, U) Sandy Mucky Mineral (S1) (LRR O, S) Sendy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 150A) Anomalous Bright Loamy Soils (F20) (ML	Indicators for Pro U)	blematic Hydric Soils ³ : 9) (LRR O) 10) (LRR S) ic (F18) (outside MLRA 150A, odplain Soils (F19) (LRR P, S, right Loamy Soils (F20) laterial (TF2)
Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) 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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Polyvalue Below Surface (S8) (LRR S, T, T) Loamy Mucky Mineral (F1) (LRR O) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150E) Piedmont Floodplain Soils (F19) (MLRA 1 Anomalous Bright Loamy Soils (F20) (ML	U)1 cm Muck (A2 cm Muck (A	.9) (LRR O) .10) (LRR S) .ic (F18) (outside MLRA 150A, odplain Soils (F19) (LRR P, S, right Loamy Soils (F20) laterial (TF2)
Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) 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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Thin Dark Surface (S9) (LRR O, Loamy Mucky Mineral (F1) (LRR O) Loamy Mucky Mineral (F1) (LRR O) Depleted Matrix (F3) Redox Dark Surface (F7) Redox Depressions (F8) Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 150B) Anomalous Bright Loamy Soils (F20) (MLRA 150B)	2 cm Muck (A Reduced Vert Piedmont Floo Anomalous Br (MLRA 153B) Red Parent M Very Shallow	a.10) (LRR S) dic (F18) (outside MLRA 150A, podplain Soils (F19) (LRR P, S, right Loamy Soils (F20) laterial (TF2)
Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stem Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Loamy Mucky Mineral (F1) (LRR O) Loamy Mucky Mineral (F1) (LRR O) Depleted Matrix (F3) Redox Dark Surface (F7) Redox Depressions (F8) Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150E) Piedmont Floodplain Soils (F19) (MLRA 150A) Anomalous Bright Loamy Soils (F20) (ML	Reduced Vert Piedmont Floo Anomalous Br (MLRA 153B) Red Parent M Very Shallow	cic (F18) (outside MLRA 150A, codplain Soils (F19) (LRR P, S, right Loamy Soils (F20)) laterial (TF2)
Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F7) Redox Depressions (F8) Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150E) Piedmont Floodplain Soils (F19) (MLRA 150D) (MLRA 150D) Anomalous Bright Loamy Soils (F20) (MLRA 150D) (MLRA 150D)	Piedmont Floo Anomalous Br (MLRA 153B) Red Parent M Very Shallow	odplain Soils (F19) (LRR P, S, right Loamy Soils (F20)) laterial (TF2)
Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U)	Anomalous Bi (MLRA 153B) Red Parent M Very Shallow	right Loamy Soils (F20)) laterial (TF2)
Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Dark Surface (F7) Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150E) Anomalous Bright Loamy Soils (F20) (MLRA 151) Anomalous Bright Loamy Soils (F20) (MLRA 151)	(MLRA 153B) Red Parent M Very Shallow	laterial (TF2)
5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Depleted Dark Surface (F7) Redox Depressions (F8) Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150E) Piedmont Floodplain Soils (F19) (MLRA 151) Anomalous Bright Loamy Soils (F20) (MLRA 151)	Red Parent M	laterial (TF2)
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) Redox Depressions (F8) Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150E) Piedmont Floodplain Soils (F19) (MLRA 151) Anomalous Bright Loamy Soils (F20) (MLRA 151)	Very Shallow	, ,
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) Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150E Piedmont Floodplain Soils (F19) (MLRA 150A) Anomalous Bright Loamy Soils (F20) (ML		Dark Surface (TF12)
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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, C) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150E Piedmont Floodplain Soils (F19) (MLRA 150A) Anomalous Bright Loamy Soils (F20) (ML	Other (Explain	
Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Iron-Manganese Masses (F12) (LRR O, Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150E Piedmont Floodplain Soils (F19) (MLRA 150A) Anomalous Bright Loamy Soils (F20) (ML		n 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) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150E Piedmont Floodplain Soils (F19) (MLRA 1 Anomalous Bright Loamy Soils (F20) (ML		
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) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150E Piedmont Floodplain Soils (F19) (MLRA 150A) Anomalous Bright Loamy Soils (F20) (MLRA 150A)		of hydrophytic vegetation and
Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Reduced Vertic (F18) (MLRA 150A, 150B Piedmont Floodplain Soils (F19) (MLRA 1 Anomalous Bright Loamy Soils (F20) (ML		drology must be present, urbed or problematic.
Sandy Redox (S5) — Piedmont Floodplain Soils (F19) (MLRA 1 Stripped Matrix (S6) — Dark Surface (S7) (LRR P, S, T, U) Piedmont Floodplain Soils (F19) (MLRA 1 Anomalous Bright Loamy Soils (F20) (ML	uniess dist	arbed or problematic.
Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Loamy Soils (F20) (ML	3)	
Dark Surface (S7) (LRR P, S, T, U)	49A)	
	RA 149A, 153C, 153D)	
Restrictive Layer (if observed):		
Type:		
	Hydric Soil Present? Yes	s No X
Deput (mones).	riyanc John resent: Tes	NOX
Remarks:		
No positive indication of hydric soils was observed.		

Project/Site:	E	Bluewater SPM		County:	Nueces	S	Sampling Date:	January 30, 2019
Applicant/Owner:		Lloyd Engine			tate:		Sample Point:	•
Investigator(s):	E. Munsche	r and	J. Mitchell	Section, Towns	hip, Range:		N/A	
Landform (hillslope, terra	ace, etc.):	Prairie		Local relief (cor	icave, convex, r	none): N	lone Slope	(%): 0-5
Subregion (LRR or MLR		T		Lat: 27		·		atum: North American Datum 1983
Soil Map Unit Name:	<i>'</i>	ne sand, 0 to 1 perce	nt slopes, occasio					N/A
Are climatic / hydrologic							ain in Remarks.)	
, ,		No ,or Hydrology	•	· -			es" present? Yes	s X No
		No ,or Hydrology		ally problematic?			ain any answers ir	
CUMMARY OF FI					·	•	·	•
SUMMARY OF FI	NDINGS -	Attach Site ma	p snowing s	ampling po	int location	s, transec	its, importan	t reatures, etc.
Hydrophytic Vegetation	Present?	Yes	NoX					
Hydric Soil Present?		Yes	No X	Is the San	pled Area			
Wetland Hydrology Pre	sent?	Yes	No X	within a V	/etland?	Yes	No	o X
, 0,						_		
Remarks:				•				
This waint date			4- 41 11: -6 :					
i nis point was dete	rmined not to	be within a wetland d	ue to the lack of a	all three wetland	спіепа.			
The survey area w	as determined	to be wetter than nor	mal at the time of	survey.				
HYDROLOGY								
Wetland hydrolog	y Indicators:					Secondary	Indicators (minim	um of two required)
Primary Indicators	minimum of o	ne is required; check	all that apply)				ace Soil Cracks (E	
Surface Wat	•		Aquatic Fauna	(B13)			,	oncave Surface (B8)
High Water			Marl Deposits				nage Patterns (B1	, ,
Saturation (A			_				s Trim Lines (B16)	•
Water Marks	•			spheres on Livir	na Poots(C3)		Season Water Tal	
Sediment De	. ,		_	educed Iron (C4)			fish Burrows (C8)	, ,
			_	, ,			, ,	
Drift Deposit			_	eduction in Tilled	Solis (Co)			verial Imagery (C9)
Algal Mat or	, ,		_ Thin Muck Sur	, ,			morphic Position (D2)
Iron Deposits		(57)	Other (Explain	in Remarks)			low Aquitard (D3)	
		l Imagery (B7)					-Neutral Test (D5)	
Water-Staine	ed Leaves (B9))				Spha	agnum moss (D8)	(LRR T, U)
Field Observations					1			
Field Observations:								
Surface Water Present		NoX	- ' '	· ——				
Water Table Present?	Yes		_ Depth (inche					
Saturation Present?	Yes	NoX	_ Depth (inche	es): <u>>20</u>	Wetland Hy	ydrology Pres	sent? Yes	No <u>X</u>
(includes capillary fring								
Describe Recorded	Data (stream	gauge, monitoring we	ell, aerial photos,	previous inspect	ions), if availabl	e:		
Remarks:								
No positive indicati	on of wetland I	hydrology was observ	red.					

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft.)	% cover	Species?	Status	Number of Dominant Species	
· · · · · · · · · · · · · · · · · · ·	, 				·	(A)
2.						` '
					Total Number of Dominant	
3						(B)
4					Species Across Air Strata.	(D)
5						
6					Percent of Dominant Species	
			= Total Cover		That Are OBL, FACW, or FAC:	(A/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1. None Observed					Total % Cover of: Multiply by:	
2					OBL species 0 x 1 = 0	
3					FACW species 15 x 2 = 30	
4					FAC species 0 x 3 = 0	
5.					FACU species 30 x 4 = 120	
6.					UPL species 50 x 5 = 250	
	-		= Total Cover		Column Totals: 95 (A) 400	— (B)
	50% of total cover:		20% of total cover:	0	(1)	— (⁻ /
Shrub Stratum (Plot size:			20% of total cover.		Prevalence Index = B/A = 4.21	
					Frevalence index – B/A – 4.21	
					Harlanda Ca Manada Can India da ana	
2.					Hydrophytic Vegetation Indicators:	
3					1 - Rapid Test for Hydrophytic Vegetation	
4					2 - Dominance Test is >50%	
5					3 - Prevalence Index is ≤ 3.0 ¹	
6					Problematic Hydrophytic Vegetation ¹ (Explain)	
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
1. Opuntia engelmannii		20	Yes	UPL	Definitions of Five Vegetation Strata:	
Andropogon glomeratus	-	15	No	FACW	Tree - Woody plants, excluding woody vines,	
Nassella leucotricha		30	Yes	UPL	approximately 20 ft (6m) or more in height and 3 in.	
4. Schizachyrium scoparium		30	Yes	FACU	(7.6 cm) or larger in diameter at breast height (DBH).	
			<u> 1es</u>	<u> </u>	(7.0 cm) of larger in diameter at breast neight (DBH).	
5					Sapling - Woody plants, excluding woody vines,	
6.					approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8					than 3 m. (7.0 cm) DBH.	
9					Observe Wasselson to a server discovered and a	
10					Shrub - Woody plants, excluding woody vines,	
11					approximately 3 to 20 ft (1 to 6 m) in height.	
		95	= Total Cover			
	50% of total cover:	47.5	20% of total cover:	19	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:	30 ft)				herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2.					3 ft (1 m) in height.	
3.						
4.					Woody vine - All woody vines, regardless of height.	
5						i
			= Total Cover		Hydrophytic	
	50% of total cover:		20% of total cover:	0	Vegetation	
	30 % of total cover.		20% of total cover.		_	
					Present? Yes NoX	
5						
Remarks: (if observed, list mo	orphological adaptat	ions below,).			
No positive indication of hydro	phytic vegetation wa	as observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).	

epth	Matrix			Redox F	eatures						
inches)	Color (moist)	%_	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0-16	10YR 5/1	>99	10YR 5/8	<1_	C	PL Loamy Sand					
Type: C=0	Concentration, D=De	oletion, RM	======================================	IS=Masked	d Sand Grains.	² Location: P	 L=Pore Lining, M=Matrix	 (.			
lydric Soi	ls Indicators: (Appl	icable to a	all LRRs, unless ot	herwise n	oted.)			ematic Hydric Soils ³ :			
Histos	sol (A1)		Polyva	ue Below	Surface (S8) (L	RR S, T, U)	1 cm Muck (A9)	(LRR O)			
Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T,					T, U)	2 cm Muck (A10)) (LRR S)				
Black Histic (A3) Loamy Mucky Mineral (F1) (LRR 0)						O)	Reduced Vertic (F18) (outside MLRA 150A,B)				
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)							Piedmont Floodp	olain Soils (F19) (LRR P, S, T			
Stratified Layers (A5) Depleted Matrix (F3)							Anomalous Brigh	nt Loamy Soils (F20)			
Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6)						(MLRA 153B)					
5 cm l	cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7)						Red Parent Material (TF2)				
Muck	Presence (A8) (LRR						rk Surface (TF12)				
	Muck (A9) (LRR P, T)		Marl (F	10) (LRR I	J)		Other (Explain in	Remarks)			
	ted Below Dark Surfa	ice (A11)		,	F11) (MLRA 1 5	•	3				
	Dark Surface (A12)			•	Masses (F12) (hydrophytic vegetation and			
	Prairie Redox (A16)				13) (LRR P, T	, U)	wetland hydrology must be present, unless disturbed or problematic.				
	/ Mucky Mineral (S1)	(LRR O, S		`) (MLRA 151)			•			
	Gleyed Matrix (S4)			,	18) (MLRA 15	•					
	/ Redox (S5)			•	ain Soils (F19)	•	NA 4500 450D)				
	ed Matrix (S6) Surface (S7) (LRR P,	e T II)	Anoma	ious Brigni	Loamy Soils (F	-20) (NILRA 14:	9A, 153C, 153D)				
Daik S	Surface (S7) (LKK P,	3, 1, 0)									
Restrictive	Layer (if observed)):									
Type:											
	inches):					Hydrid	Soil Present? Yes	No X			
Remarks:											

Project/Site:		Bluewater SPM		County	:	Nueces	Samn	ing Date:	January 30	0 2019
Applicant/Owner:		Lloyd Er	ngineering		State			le Point:		
Investigator(s):	E. Munsch	ner and	J. Mitchell	Section	n, Township	, Range:		N/A		_
Landform (hillslope, ter			rairie	Local r	relief (conca	ve, convex, no	one): None	Slope (%):	0-5
Subregion (LRR or MLI	RA):	N	lone	 La	t: <u>27.85</u>	52517 Lo	ong: <u>-97.06</u>	9715 Dat	um: North Arr	nerican Datum 1983
Soil Map Unit Name:	Mustang	fine sand, 0 to 1 p	percent slopes, occ	asionally flo	oded, frequ	ently ponded	_ NWI Classificat	ion:	N/A	
Are climatic / hydrologic	conditions o	n the site typical for	or this time of year	? (Yes /	′ No)	No	_(if no, explain in	Remarks.)		
Are Vegetation	No,Soil_	No ,or Hydro					Circumstances" pr			No
Are Vegetation	No,Soil_	No ,or Hydro	ology <u>No</u> na	aturally prob	olematic?	(If n	ieeded, explain ai	ny answers in	Remarks.)	
SUMMARY OF F	INDINGS	- Attach site	map showing	g sampli	ing poin	locations	, transects,	important	features	, etc.
Hydrophytic Vegetation	n Procent?	Yes X	No							
Hydric Soil Present?	ii i ieseit:	Yes			the Sampl	od Aroa				
Wetland Hydrology Pi	esent?	Yes			ithin a Wet		Yes	No	x	
Wedana Hydrology H	COOTIC:	103		_ "	Turnin a vvc	idiid i	103			_
Remarks:				· · · · · ·						
This point was de	ermined not t	o he within a wetl:	and due to the lack	of hydric s	oils and wet	land hydrology	,			
Time point was do	orraniou not t	o bo wami a woad	and duo to the lack	or riyano o	one and wor	and mydrology	•			
The survey area v	/as determin∈	ed to be wetter tha	n normal at the tim	e of survey	·.					
HYDROLOGY										
Wetland hydrolo	qy Indicators	 3:					Secondary Indic	atore (minimu	m of two rec	uired)
_			heck all that apply)					oil Cracks (B6		ulled)
Surface Wa			Aquatic Fa					Vegetated Cor	•	ce (B8)
High Water	` ,		Marl Depos		LRR U)			Patterns (B10		30 (20)
Saturation (Hydrogen S	, , ,	-			n Lines (B16)	,	
Water Mark	•				s on Living	Roots(C3)		on Water Tabl	le (C2)	
	eposits (B2)		Presence of		_	(0013(00)		Burrows (C8)	C (O2)	
					` ,	oilo (C6)		, ,	orial Imagan	, (CO)
Drift Depos					n in Tilled So	ilis (Co)		n Visible on Ae		(Ca)
Algal Mat o			Thin Muck	•	•			hic Position (D	12)	
Iron Deposi			Other (Exp	iain in Rem	narks)			quitard (D3)		
		rial Imagery (B7)						tral Test (D5)		
Water-Stair	ned Leaves (B	; 9)					Sphagnui	m moss (D8) (LRR T, U)	
Field Observations:										
Surface Water Preser	ıt? Yes	No	X Depth (in	nches):	N/A					
Water Table Present?			X Depth (in	, <u> </u>	>20					
Saturation Present?	Yes		· ` `	nches):		Wetland Hyd	drology Present?	Yes	No	X
(includes capillary frin				, -						
Describe Recorde	d Data (strea	m gauge, monitori	ing well, aerial phot	os, previou	s inspection	s), if available:	:			
Remarks:										
No positive indica	tion of wetlan	d hydrology was o	heerved							
No positive indica	ion or welland	a flydrology was o	bserved.							

Sampling Point: DPA03	38_U
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		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft)	% cover	Species?	Status	Number of Dominant Species	
1 Nama Observad		70 00 001	Орсоюз:	Otatus	That Are OBL, FACW, or FAC:	(\(\)
					That Are OBE, I ACW, OF I AC.	(A)
2					T	
3.			-		Total Number of Dominant	(D)
4					Species Across All Strata: 1	(B)
5						
6					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC: 100%	(A/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
None Observed					Total % Cover of: Multiply by:	
2.					OBL species 0 x 1 = 0	
3.					FACW species 0 x 2 = 0	
4					FAC species 90 x 3 = 270	_
			· · · · · · · · · · · · · · · · · · ·		FACU species 5 x 4 = 20	
5						
6			T-1-1-0			(D)
			= Total Cover		Column Totals: (A) 440	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = 3.52	
1. None Observed						
2					Hydrophytic Vegetation Indicators:	
3					1 - Rapid Test for Hydrophytic Vegetation	
4					X 2 - Dominance Test is >50%	
5			<u></u> .		3 - Prevalence Index is ≤ 3.0 ¹	
6					Problematic Hydrophytic Vegetation ¹ (Explain)
		0	= Total Cover			
	50% of total cover:		20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
Muhlenbergia schreberi		80	Yes	FAC	Definitions of Five Vegetation Strata:	
Ambrosia psilostachya		10	No	FAC	Tree - Woody plants, excluding woody vines,	
3. Oenothera drummondii		15	No	UPL	approximately 20 ft (6m) or more in height and 3 in.	
4. Opuntia engelmannii		10	No	UPL	(7.6 cm) or larger in diameter at breast height (DBH).	
5. <u>Verbena halei</u>		5	No	<u>UPL</u>	Continue Manda de planta avaludir a vera de viva	
6. Schizachyrium scoparium		5	No	<u>FACU</u>	Sapling - Woody plants, excluding woody vines,	
7					approximately 20 ft (6 m) or more in height and less	
8					than 3 in. (7.6 cm) DBH.	
9						
10					Shrub - Woody plants, excluding woody vines,	
11.					approximately 3 to 20 ft (1 to 6 m) in height.	
		125	= Total Cover			
	50% of total cover:	62.5	20% of total cover:	25	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:					herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
					3 ft (1 m) in height.	
3	-				Woody vine - All woody vines, regardless of height.	
4	•				Trocay vinos, regaralese er neight.	
5			= Total Cours		Lhudvanhutia	
			= Total Cover	_	Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes <u>X</u> No	
Remarks: (if observed, list me	orphological adaptati	ons below)).			
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	species index	ked as OBL, FACW, or FAC).	
	-					

epth	Matrix		-	Redox F	eatures				
inches)	Color (moist)	%_	Color (moist)	%_	Type ¹	Loc ²	Texture Remarks		
0-16	10YR 5/3_	_98_	10YR 5/8	R 5/8 2 C M Loamy Sand					
			10YR 4/6_	_<1_	C	M			
	Concentration, D=Dep					² Location: P	L=Pore Lining, M=Matrix	_	
•	s Indicators: (Appl	icable to a	•		•			ematic Hydric Soils ³ :	
Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T,							1 cm Muck (A9)	` '	
Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U)							2 cm Muck (A10	, ,	
Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O)							Reduced Vertic (F18) (outside MLRA 150A,E		
· ·	gen Sulfide (A4)			Gleyed Ma	` '		plain Soils (F19) (LRR P, S, T		
	ed Layers (A5)			ed Matrix (I			nt Loamy Soils (F20)		
·	ic Bodies (A6) (LRR			Dark Surfa	. ,		(MLRA 153B)		
	Mucky Mineral (A7) (L				ırface (F7)		Red Parent Mate	. ,	
	Presence (A8) (LRR	•		Depression	` '		Very Shallow Dark Surface (TF12)		
	/luck (A9) (LRR P, T)			10) (LRR I	•		Other (Explain in Remarks)		
	ed Below Dark Surfa	ce (A11)	·	`	F11) (MLRA 1	•	3, ,, ,		
	Dark Surface (A12)			•	Masses (F12) (Indicators of hydrophytic vegetation and wetland hydrology must be present, 		
	Prairie Redox (A16)			,	-13) (LRR P, T	, U)	unless disturbed or problematic.		
	Mucky Mineral (S1)	(LRR O, S		•) (MLRA 151)			·	
	Gleyed Matrix (S4)			,	18) (MLRA 15				
	Redox (S5)			•	ain Soils (F19)	` '			
	ed Matrix (S6)		Anoma	lous Bright	Loamy Soils (F	F20) (MLRA 14 9	9A, 153C, 153D)		
Dark S	Surface (S7) (LRR P,	S, T, U)							
Restrictive	Layer (if observed)	:							
Type:									
Depth (ir	nches):					Hydrid	Soil Present? Yes _	NoX	
Remarks:									

Project/Site:	Bluew	ater SPM	С	ounty:	Nueces	Samp	ling Date:	January 30, 2019
Applicant/Owner:		Lloyd Engineerin	ng	Stat	e:	Texas Samp	ole Point:	DPA039_PSS
Investigator(s):	E. Munscher	and J.	Mitchell S	Section, Township	o, Range:	_	N/A	
Landform (hillslope, terra	ce, etc.):	Beach	L	ocal relief (conca	ave, convex, no	ne): None	Slope (%	o): <u>0-5</u>
Subregion (LRR or MLR/	٩):	None		Lat:27.8	51772 Lo	ong:97.06	7381 Datu	IM: North American Datum 1983
Soil Map Unit Name:	Mustang fine sar	nd, 0 to 1 percent s	lopes, occasion	ally flooded, frequ	uently ponded	_NWI Classificat	ion:	E2EM1P
Are climatic / hydrologic	conditions on the si	te typical for this tin	ne of year?	(Yes / No)	No	_(if no, explain in	Remarks.)	
Are VegetationN	lo,Soil No _	,or Hydrology	No significa	antly disturbed?	Are "Normal C	Circumstances" p	resent? Yes _	X No
Are VegetationN	lo,SoilNo	,or Hydrology	No naturall	y problematic?	(If n	eeded, explain a	ny answers in F	temarks.)
SUMMARY OF FI	NDINGS - Atta	ch site map s	showing sa	mplina poin	t locations	. transects.	important t	features, etc.
				p9 p		,,		
Hydrophytic Vegetation		sX N	lo					
Hydric Soil Present?	Yes		lo	Is the Samp				
Wetland Hydrology Pre	sent? Yes	sXN	lo	within a Wet	tland?	Yes X	No_	
D								
Remarks:								
This point was dete	mined to be within	a wetland due to the	ne presence of a	all 3 wetland criter	ria.			
The survey area wa	s determined to be	wetter than normal	at the time of s	urvey.				
HYDROLOGY								
Wetland hydrology	/ Indicators:					Secondary India	cators (minimun	n of two required)
Primary Indicators (minimum of one is	required; check all t	that apply)				Soil Cracks (B6)	
X Surface Wate		-	Aquatic Fauna (I	B13)			, ,	cave Surface (B8)
High Water T	, ,		Marl Deposits (B	•			Patterns (B10)	, ,
Saturation (A	, ,		Hydrogen Sulfide				m Lines (B16)	
Water Marks	•		-	pheres on Living	Roots(C3)		on Water Table	(C2)
Sediment De			Presence of Rec	·	, ,		Burrows (C8)	,
Drift Deposits	, ,			luction in Tilled So	oils (C6)			ial Imagery (C9)
Algal Mat or 0			Thin Muck Surfa		,		hic Position (D2	, ,
Iron Deposits			Other (Explain ir	, ,			Aquitard (D3)	•
	sible on Aerial Imag			,		X FAC-Neu		
	d Leaves (B9)	, , ,					m moss (D8) (L	RR T, U)
							. , , ,	
Field Observations:								
Surface Water Present	? Yes <u>X</u>	_ No	Depth (inches)): <u> 4 </u>				
Water Table Present?	Yes	_ No X	Depth (inches)): >20				
Saturation Present?	Yes	_ No X	Depth (inches)): >20	Wetland Hyd	Irology Present	? Yes <u>X</u>	No
(includes capillary fringe	;)							
Describe Recorded	Data (stream gaug	e, monitoring well, a	aerial photos, pr	revious inspection	ns), if available:			
Remarks:								
A positive indication	of wetland hydrolo	gy was observed (a	at least one prim	nary indicator).				

Sampling Point:	DPA039_PSS
•	

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft.)	% cover	Species?	Status	Number of Dominant Species	
					That Are OBL, FACW, or FAC: 4 (A	۹)
2.						
3.					Total Number of Dominant	
4.					Species Across All Strata: 4 (E	3)
5.			<u> </u>			
6.			·		Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC: 100%	NB)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
None Observed					Total % Cover of: Multiply by:	
2.					OBL species 85 x 1 = 85	
3.					FACW species 0 x 2 = 0	
4.					FAC species 0 x 3 = 0	
5.					FACU species 0 x 4 = 0	
6.					UPL species 0 x 5 = 0	
		0	= Total Cover		Column Totals: 85 (A) 85	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = 1.00	_
1. Avicennia germinans		50	Yes	OBL		
2.					Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
4.					X 2 - Dominance Test is >50%	
5.					X 3 - Prevalence Index is ≤ 3.0 ¹	
6.					Problematic Hydrophytic Vegetation ¹ (Explain)	
		50	= Total Cover			
	50% of total cover:	25	20% of total cover:	10	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
1. Avicennia germinans		10	Yes	OBL	Definitions of Five Vegetation Strata:	
2. Salicornia depressa		10	Yes	OBL	Tree - Woody plants, excluding woody vines,	
3. Batis maritima		15	Yes	OBL	approximately 20 ft (6m) or more in height and 3 in.	
4					(7.6 cm) or larger in diameter at breast height (DBH).	
5						
6					Sapling - Woody plants, excluding woody vines,	
7			·		approximately 20 ft (6 m) or more in height and less	
8			. <u> </u>		than 3 in. (7.6 cm) DBH.	
9			. <u> </u>			
10					Shrub - Woody plants, excluding woody vines,	
11			<u> </u>		approximately 3 to 20 ft (1 to 6 m) in height.	
		35	= Total Cover			
	50% of total cover:	17.5	20% of total cover:	7	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size	:30 ft)				herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2					3 ft (1 m) in height.	
3			<u> </u>			
4			<u> </u>		Woody vine - All woody vines, regardless of height.	,
5						
			= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes <u>X</u> No	
Remarks: (if observed, list m	norphological adaptat	ions below).			
A positive indication of hydro	phytic vegetation was	observed	(>50% of dominant	species index	ked as OBL, FACW, or FAC).	
. ,	·				•	
A positive indication of hydro	phytic vegetation was	observed	(Prevalence Index is	s ≤ 3.00).		
. ,	•		,	,		
						ı

SOIL

Sampling Point: DPA039_PSS

Depth	ription: (Describe Matrix	to the dep	an necasa to acc	Redox F	eatures		,	
inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-16	10Y 5/1	100	None				Clay	
		-						
		•						
		•						
			B. J. J. Matrice	<u> </u>	1.0 1.0 1	21	Daniel Lining M. Mate	
	ncentration, D=Dep					-Location: Pt	_=Pore Lining, M=Matr	_
•	Indicators: (Appl	icable to al	•		•			lematic Hydric Soils ³ :
Histosol					Surface (S8) (L		1 cm Muck (A9)	
	oipedon (A2)				e (S9) (LRR S,	· ·	2 cm Muck (A1)	
	istic (A3)			-	neral (F1) (LRR	O)		(F18) (outside MLRA 150A,B
Hydroge	en Sulfide (A4)		X Loamy	/ Gleyed Ma	atrix (F2)		Piedmont Floor	plain Soils (F19) (LRR P, S, T
Stratified	d Layers (A5)		Deplet	ted Matrix (F3)		Anomalous Brig	ht Loamy Soils (F20)
Organic	Bodies (A6) (LRR I	P, T, U)	Redox	Dark Surfa	ace (F6)		(MLRA 153B)	
5 cm Mu	ıcky Mineral (A7) (L	RR P, T, U	Deplet	ted Dark Su	urface (F7)		Red Parent Ma	erial (TF2)
Muck Pr	resence (A8) (LRR	U)	Redox	Depressio	ns (F8)		Very Shallow D	ark Surface (TF12)
1 cm Mu	ıck (A9) (LRR P, T))	Marl (I	F10) (LRR	U)		Other (Explain i	n Remarks)
Depleted	d Below Dark Surfa	ce (A11)	Deplet	ted Ochric ((F11) (MLRA 1	51)		
Thick Da	ark Surface (A12)		Iron-M	langanese I	Masses (F12)	LRR O, P, T)		hydrophytic vegetation and
Coast P	rairie Redox (A16) ((MLRA 150	A) Umbri	c Surface (F	F13) (LRR P, T	, U)		ology must be present,
—— Sandy M	Mucky Mineral (S1)	(LRR O, S)	Delta	Ochric (F17	7) (MLRA 151)		unless distur	ped or problematic.
Sandy G	Gleyed Matrix (S4)		Reduc	ed Vertic (F	F18) (MLRA 15	0A, 150B)		
	Redox (S5)			,	lain Soils (F19)	•		
	Matrix (S6)			-	, ,	-	A, 153C, 153D)	
	, ,	0 T III		a.oao	t Louining Come (.	_0) (<u>_</u>	,,	
Restrictive L	.ayer (if observed)	:				Hydric	Soil Present? Yes	X No
Restrictive L Type: Depth (inc	ayer (if observed)	:				Hydric	Soil Present? Yes	X No
Restrictive L	ayer (if observed)	:				Hydric	Soil Present? Yes	X No
Restrictive L Type: Depth (inc	ayer (if observed)	:				Hydric	Soil Present? Yes	X No
Restrictive L Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes	X No
Restrictive L Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes	X No
Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes	XNo
Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes	XNo
Restrictive L Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes	X No
Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes	X No
Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes	X No
Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes	X No
Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes	X No
Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes	X No
Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes	X No
Restrictive L Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes	X No
Restrictive L Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes	X No
Restrictive L Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes	X No
Restrictive L Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes	X No
Restrictive L Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes	X No
Restrictive L Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes	X No
Restrictive L Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes	X No
Restrictive L Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes	X No
Restrictive L Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes	X No
Restrictive L Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes	X No
Restrictive L Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes	X No
Restrictive L Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes	X No
Restrictive L Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes	X No

Project/Site:	Bluewater SPM	County	: Nueces	s Samplii	ng Date: January 30, 201	19
Applicant/Owner:	Lloyd Enginee	ring	State:	Texas Sample	e Point: DPA040_PEM	1
Investigator(s):	E. Munscher and	J. Mitchell Section	n, Township, Range: _		N/A	
Landform (hillslope, terrace	e, etc.): Marsh, Saltwa	iter Local	relief (concave, convex	none): Concave	Slope (%):0-5	
Subregion (LRR or MLRA)	: None	La	at: 27.854818	Long: <u>-97.072</u>	Datum: North American D	Datum 1983
Soil Map Unit Name:	ljam cla	y loam, rarely flooded		NWI Classification	on:N/A	
Are climatic / hydrologic co	onditions on the site typical for this	•	, 	(if no, explain in F	*	
	,Soil No , or Hydrology			· ·	sent? Yes X No	
Are Vegetation No	,Soil No , or Hydrology	No naturally pro	blematic? (If needed, explain any	y answers in Remarks.)	
SUMMARY OF FIN	DINGS - Attach site map	showing sampl	ing point locatio	ns, transects, i	mportant features, etc	C.
Hydrophytic Vegetation P Hydric Soil Present?	Present? Yes X Yes X	No Is	s the Sampled Area			
Wetland Hydrology Prese			vithin a Wetland?	Yes X	No	
·	nined to be within a wetland due to determined to be wetter than norm	·				
HYDROLOGY						
Wetland hydrology	Indicators:			Secondary Indica	ators (minimum of two required))
Primary Indicators (m	inimum of one is required; check a	ll that apply)			oil Cracks (B6)	
X Surface Water	·	Aquatic Fauna (B13)			egetated Concave Surface (B8	8)
High Water Tal	· ·	Marl Deposits (B15) (LRR U)		Patterns (B10)	,
Saturation (A3)	<u></u>	Hydrogen Sulfide Odd	or (C1)	Moss Trim	Lines (B16)	
Water Marks (E	31)	Oxidized Rhizosphere	es on Living Roots(C3)	Dry-Seaso	n Water Table (C2)	
Sediment Depo	osits (B2)	Presence of Reduced	I Iron (C4)	Crayfish B	urrows (C8)	
Drift Deposits (B3)	Recent Iron Reduction	n in Tilled Soils (C6)	Saturation	Visible on Aerial Imagery (C9)	
X Algal Mat or Cr	rust (B4)	Thin Muck Surface (C	27)	Geomorph	ic Position (D2)	
Iron Deposits (I	B5)	Other (Explain in Ren	narks)	Shallow Ad	quitard (D3)	
Inundation Visil	ble on Aerial Imagery (B7)			X FAC-Neutr	al Test (D5)	
Water-Stained	Leaves (B9)			 Sphagnum	moss (D8) (LRR T, U)	
Field Observations:						
Surface Water Present?	YesX No	Depth (inches):	7			
Water Table Present?	Yes No X	Depth (inches):	>20			
Saturation Present?	Yes NoX	Depth (inches):	>20 Wetland I	Hydrology Present?	Yes X No	_
(includes capillary fringe)						
Describe Recorded D	oata (stream gauge, monitoring well	l, aerial photos, previou	us inspections), if availa	ble:		
Remarks:						
						ļ
A positive indication of	of wetland hydrology was observed	(at least one primary in	ndicator).			

Sampling Point: DPA040_PEM

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft)	% cover	Species?	Status	Number of Dominant Species	
4. Mana Observat		70 COVE	Оресіез:	Otatus	That Are OBL, FACW, or FAC: 2 (A	.,
					That Are OBL, FACW, OF FAC.	' [']
2					Total New Lond Device and	
3					Total Number of Dominant	,,
4					Species Across All Strata: 2 (E	3)
5						
6					Percent of Dominant Species	
			= Total Cover		That Are OBL, FACW, or FAC: 100% (A	VB)
	50% of total cover:	0	20% of total cover:	0	Prevalence Index Worksheet:	
Sapling Stratum (Plot size:	30 ft.)					
1. None Observed					Total % Cover of: Multiply by:	_
2					OBL species 90 x 1 = 90	_
3					FACW species 0 x 2 = 0	_
4					FAC species 0 x 3 = 0	_
5					FACU species 0 x 4 = 0	_
6					UPL species 0 x 5 = 0	_
		0	= Total Cover		Column Totals:90 (A)90	_ (B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = 1.00	_
1. None Observed						
2					Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
4.					X 2 - Dominance Test is >50%	
5.					X 3 - Prevalence Index is ≤ 3.0 ¹	
6.					Problematic Hydrophytic Vegetation ¹ (Explain)	
		0	= Total Cover			
	50% of total cover:		20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)		. —		be present, unless disturbed or problematic.	
1. Typha latifolia	,	40	Yes	OBL	Definitions of Five Vegetation Strata:	
Spartina spartinae		40	Yes	OBL	Tree - Woody plants, excluding woody vines,	
Borrichia frutescens		10	No	OBL	approximately 20 ft (6m) or more in height and 3 in.	
4				OBL	(7.6 cm) or larger in diameter at breast height (DBH).	
5.					(7.0 only of larger in diameter at broadt height (BBH).	
6.					Sapling - Woody plants, excluding woody vines,	
					approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8					,	
9					Shrub - Woody plants, excluding woody vines,	
10 11.	-				approximately 3 to 20 ft (1 to 6 m) in height.	
11		90	- Total Cover			
	EON of total agreem		= Total Cover	10	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Dlat size)	50% of total cover:	45	20% of total cover:	10	herbaceous vines, regardless of size, and woody	
Woody Vine Stratum (Plot size: 1. None Observed					plants, except woody vines, less than approximately	
					3 ft (1 m) in height.	
2.					, , ,	
3					Woody vine - All woody vines, regardless of height.	
4					tilles, regaralese et lielgill	
5		0	= Total Cover		Hydrophytic	
	EON of total agreem		•	0		
	50% of total cover:		20% of total cover:	0	Vegetation	
					Present? Yes <u>X</u> No	
Demander //f about all list us			<u> </u>			
Remarks: (if observed, list mo	orpriological adaptat	lons below).			
A positive indication of hydrop	hytic vegetation was	s observed	(>50% of dominant	species index	ked as OBL, FACW, or FAC).	
A positive indication of hydrop	hytic vegetation was	s observed	(Prevalence Index is	s ≤ 3.00).		

epth epth	Matrix	•		Redox F			ence of indicators.)	
nches)	Color (moist)	<u></u> %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-16	10Y 5/1	100	None		<u>- 1 ypc</u>		Sandy Clay	romano
 Tyne: C=Co	ncentration, D=Dep		Peduced Matrix M	 IS=Maske	d Sand Grains	² Location: Pl	 L=Pore Lining, M=Matri	· · · · · · · · · · · · · · · · · · ·
	Indicators: (Appli					Location: 1		ematic Hydric Soils ³ :
Histosol		ouble to un			Surface (S8) (L	RR S. T. U)	1 cm Muck (A9)	•
	pipedon (A2)				e (S9) (LRR S , '		2 cm Muck (A10	
	stic (A3)				neral (F1) (LRR	•		(F18) (outside MLRA 150A, I
	n Sulfide (A4)			Gleyed Ma		-,		plain Soils (F19) (LRR P, S, 1
	d Layers (A5)			ed Matrix (nt Loamy Soils (F20)
	Bodies (A6) (LRR F	P. T. U)		Dark Surfa	•		(MLRA 153B)	it Louiny Colle (1 20)
<u> </u>	ıcky Mineral (A7) (L				ırface (F7)		Red Parent Mate	erial (TF2)
	esence (A8) (LRR I			Depressio				ark Surface (TF12)
	ick (A9) (LRR P, T)	•		10) (LRR	` '		Other (Explain in	, ,
	d Below Dark Surfac				F11) (MLRA 15	1)		
	ark Surface (A12)	oo (/ · · · /)			Masses (F12) (-	³ Indicators of	hydrophytic vegetation and
	rairie Redox (A16) (MLRA 150A		-	=13) (LRR P, T ,		wetland hydro	logy must be present,
	lucky Mineral (S1) () (MLRA 151)	-,	unless disturb	ed or problematic.
	Gleyed Matrix (S4)			,	7 (MLRA 15	OA. 150B)		
	Redox (S5)				ain Soils (F19)	•		
	Matrix (S6)			-	, ,	-	A, 153C, 153D)	
	rface (S7) (LRR P ,	S T II)		.ouo 2g		20) (2 10111	,,	
Type: Depth (inc						Hydric	Soil Present? Yes _	X No
Remarks:								
temarks.								
		l was observ	2d					
nositive ind	ication of hydric soil	i was observ	su.					
positive ind	ication of hydric soi							
opositive ind	ication of hydric soi							
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a positive ind	ication of hydric soi							

Project/Site:	Blu	ewater SPM	Cc	ounty:	Nueces	Sampling	Date∙ Ja	anuary 30,	2019
Applicant/Owner:		Lloyd Enginee		State			Point:		
Investigator(s):	E. Munscher			ection, Township			N/A	2	
Landform (hillslope, te				ocal relief (conca	, ,	ne): Convex	Slope (%):		0-5
Subregion (LRR or ML		Т				ong:	- ' ' '		
Soil Map Unit Name:		sand, 0 to 1 percent				NWI Classification:		N/A	
Are climatic / hydrolog	c conditions on the	site typical for this	time of year? (Yes / No)	No	_ _(if no, explain in Re	marks.)		
Are Vegetation	No ,Soil No	o, or Hydrology				ircumstances" prese	nt? Yes	X N	o
Are Vegetation	No ,Soil No	o, or Hydrology	No naturally	problematic?	(If ne	eeded, explain any a	nswers in Ren	narks.)	
SUMMARY OF I	INDINGS - A	ttach site mar	showing sar	npling poin	t locations	, transects, im	portant fea	atures,	etc.
Γ				T		•	•		
Hydrophytic Vegetati	on Dracant?	Yes	NoX						
Hydric Soil Present?			No	Is the Sampl	led Area				
Wetland Hydrology P		Yes	No X	within a Wet		Yes	No	Х	
Wolland 11, 6. 5.59, 1	CSCIR:		<u> </u>	***************************************	ilaria i				_
Remarks:				<u></u>					
This point was de	termined not to be	within a wetland du	ie to the lack of hyd	dronhytic vegetat	tion and wetland	d hydrology			
Tille politi was ac	terrimed not to 20	Within a wettend ad	e to the lack of figa	IIOpriyao vogotat	IUII and wedan	u Hydrology.			
The survey area	was determined to	be wetter than norm	nal at the time of su	ırvey.					
	, , , , , , , , , , , , , , , , , , ,								
::VDDOLOCV									
HYDROLOGY Wetland hydrolo	av Indicators:					O condendada	/···!··!···	• • • • • • • • • • • • • • • • • • • •	•15
		is required; check :	all that apply)			Secondary Indicato	•	two requ	ired)
Surface W	•	is required; check a		12)		Surface Soil		o Surface	o (BQ)
	r Table (A2)		_ Aquatic Fauna (B Marl Deposits (B1	•		Sparsely veg	jetated Conca\ terns (B10)	/e Suriaci	∌ (⊅0)
Saturation	, ,		Hydrogen Sulfide			Moss Trim Li			
Water Mar			Oxidized Rhizosp	, ,	Roots(C3)		Nater Table (C	.2)	
	Deposits (B2)		Presence of Redu	_	110010(00)	Crayfish Burr	,	<i>)</i>	
Drift Depos	. , ,		Recent Iron Redu	` ,	nils (C6)		sible on Aerial	Imagery ((C9)
	or Crust (B4)		Thin Muck Surfac		5115 (00)	Geomorphic			.00,
Iron Depos			Other (Explain in	, ,		Shallow Aqui			
l —	Visible on Aerial Im	nagery (B7)	` ` ` '	,		FAC-Neutral			
	ned Leaves (B9)	3 , , ,					oss (D8) (LRF	R T, U)	
							•		
Field Observations:									
Surface Water Prese		NoX	- ' ' '						
Water Table Present		NoX	Depth (inches):	: <u>>20</u>					
Saturation Present?	Yes	NoX	Depth (inches):	>20	Wetland Hyd	rology Present?	Yes	_ No	<u>X</u>
(includes capillary fring	 				A Mariana				
Describe Recorde	d Data (stream ga	auge, monitoring wel	il, aerial photos, pre	evious inspection	is), if available:				
Remarks:									
No positive indica	tion of wetland hyd	drology was observe	ed.						

		A l l t .	D	Leading to the control of the contro	Dominance Test worksheet:	
		Absolute	Dominant	Indicator		
Tree Stratum (Plot size:	<u>30 ft.</u>)	% cover	Species?	Status	Number of Dominant Species	
					That Are OBL, FACW, or FAC:	(A)
2						
3					Total Number of Dominant	
4					Species Across All Strata: 2	(B)
5.						
6.					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC:	(A/B)
	50% of total cover:		20% of total cover:	0		(,,,,)
Sanling Stratum (Plot size:			20% of total cover.		Prevalence Index Worksheet:	
Sapling Stratum (Plot size:	30 ft.)					
1. None Observed					Total % Cover of: Multiply by:	
2.					OBL species	
3					FACW species 5 x 2 = 10	
4					FAC species 5 x 3 = 15	
5					FACU species 30 x 4 = 120	
6					UPL species 70 x 5 = 350	
		0	= Total Cover		Column Totals:110 (A)495	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:					Prevalence Index = B/A = 4.50	
1. None Observed						
2.					Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
					2 - Dominance Test is >50%	
4						
5					3 - Prevalence Index is ≤ 3.0 ¹	
6					Problematic Hydrophytic Vegetation ¹ (Explain)	
			= Total Cover			
	50% of total cover:	0	20% of total cover:	0	Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
Schizachyrium scoparium		30	Yes	FACU	Definitions of Five Vegetation Strata:	
2. Opuntia engelmannii		10	No	UPL	Tree - Woody plants, excluding woody vines,	
3. Nassella leucotricha		40	Yes	UPL	approximately 20 ft (6m) or more in height and 3 in.	
4. Heterotheca subaxillaris		15	No	UPL	(7.6 cm) or larger in diameter at breast height (DBH).	
5. Ambrosia psilostachya		5	No	FAC		
6. Verbena halei		 5	No	UPL	Sapling - Woody plants, excluding woody vines,	
7. Andropogon glomeratus		5	No	FACW	approximately 20 ft (6 m) or more in height and less	
8.					than 3 in. (7.6 cm) DBH.	
9					, , ,	
					Shrub - Woody plants, excluding woody vines,	
10					approximately 3 to 20 ft (1 to 6 m) in height.	
11					approximately a to 20 it (1 to a m) in neight	
			= Total Cover	00	Herb - All herbaceous (non-woody) plants, including	
	50% of total cover:	55	20% of total cover:	22	herbaceous vines, regardless of size, and woody	
Woody Vine Stratum (Plot size:	30 ft)					
1. None Observed					plants, except woody vines, less than approximately	
2					3 ft (1 m) in height.	
3						
4					Woody vine - All woody vines, regardless of height.	
5						
		0	= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes No X	
Remarks: (if observed, list mo	orphological adaptati	ons below).		-	
•						
No positive indication of hydro	phytic vegetation wa	s observe	d (≥50% of dominan	t species ind	lexed as FAC- or drier).	

Depth	. Matrix				Features		ence of indicators.)	
inches)	Color (moist)	%	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks
0-16	10YR 6/2	80	10YR 5/8	20	C		Sandy Clay	
	ancentration D=Day		-Dadusad Matrix N			2l continu D	-Doro Lining M-Motr	
	concentration, D=Dep					Location: P	L=Pore Lining, M=Matr	
-	s Indicators: (Appl	icable to a			=	DD 0 T II)		lematic Hydric Soils ³ :
Histoso	, ,				Surface (S8) (L	· · · · ·	1 cm Muck (A9	
	Epipedon (A2)				ce (S9) (LRR S,	· · ·	2 cm Muck (A1	
	Histic (A3)			-	ineral (F1) (LRF	R O)		(F18) (outside MLRA 150A
	en Sulfide (A4)		Loamy	Gleyed M	latrix (F2)			dplain Soils (F19) (LRR P, S,
	ed Layers (A5)			ed Matrix			Anomalous Brig	ght Loamy Soils (F20)
Organi	c Bodies (A6) (LRR	P, T, U)		Dark Surf			(MLRA 153B)	
5 cm M	lucky Mineral (A7) (L	RR P, T, U			urface (F7)		Red Parent Ma	terial (TF2)
Muck F	Presence (A8) (LRR	U)	Redox	Depression	ons (F8)		Very Shallow D	ark Surface (TF12)
1 cm M	luck (A9) (LRR P, T))	Marl (F	10) (LRR	U)		Other (Explain	in Remarks)
Deplete	ed Below Dark Surfa	ice (A11)	Deplete	ed Ochric	(F11) (MLRA 1	51)		
Thick [Dark Surface (A12)		Iron-Ma	anganese	Masses (F12)	(LRR O, P, T)		f hydrophytic vegetation and
Coast I	Prairie Redox (A16)	(MLRA 150	A) Umbrid	Surface ((F13) (LRR P, T	', U)		ology must be present,
Sandy	Mucky Mineral (S1)	(LRR O, S)	Delta C	Ochric (F1	7) (MLRA 151)		uniess distur	bed or problematic.
Sandy	Gleyed Matrix (S4)		Reduce	ed Vertic ((F18) (MLRA 15	60A, 150B)		
X Sandy	Redox (S5)		Piedmo	ont Floodp	olain Soils (F19)	(MLRA 149A)		
Strippe	d Matrix (S6)		Anoma	lous Brigh	nt Loamy Soils (F20) (MLRA 149	A, 153C, 153D)	
	urface (S7) (LRR P,	S T II)		J	, ,	, (, , ,	
Type: Depth (ir						Hydric	Soil Present? Yes	X No
Remarks:								
A positive in	dication of hydric so	il was obser	ved.					
•	,							

Project/Site:		Bluewater SPM		County:	Nueces	Sampling	Date: Ja	anuary 31, 2019
Applicant/Owner:		Lloyd Eng	ineering				Point:	•
Investigator(s):	E. Munsche	er and _	J. Mitchell	Section, Townsh	ip, Range:	·	N/A	_
Landform (hillslope, te			rie	Local relief (cond	cave, convex, non	ie): None	Slope (%):	0-5
Subregion (LRR or ML	RA):	T		Lat:27.8	352427 Lor	ng: <u>-97.07710</u>	0 Datum:	North American Datum 19
Soil Map Unit Name:	Mustang fi	ine sand, 0 to 1 per	cent slopes, occasi	ionally flooded, fred	uently ponded	NWI Classification:		N/A
Are climatic / hydrolog	c conditions on	the site typical for	•	· /		(if no, explain in Re	,	
Are Vegetation	No,Soil	No ,or Hydrolo			Are "Normal Cir	rcumstances" prese	nt? Yes	X No
Are Vegetation	No ,Soil_	No ,or Hydrolo	ogy No natu	rally problematic?	(If ne	eded, explain any a	nswers in Ren	narks.)
SUMMARY OF F	INDINGS -	Attach site n	nap showing s	sampling poi	nt locations,	transects, im	portant fea	atures, etc.
Hydrophytic Vegetation	on Present?	Yes X	No					
Hydric Soil Present?	711 1000IK.	Yes X	No		oled Area			
Wetland Hydrology P	resent?	Yes	No X			Yes	No	X
, 0,			·	-				
Remarks:								
This point was de	termined not to	be within a wetlan	d due to the lack of	f wetland hydrology	_			
The survey area	was determined	to be wetter than	normal at the time o	of survey.				
HYDROLOGY								
Wetland hydrolo	gy Indicators:	:				Secondary Indicato	rs (minimum o	f two required)
Primary Indicators	s (minimum of c	one is required; che	eck all that apply)		_	Surface Soil		rtwo required)
Surface Wa		mo io roquirou, ono	Aquatic Faun	na (B13)			` ,	ve Surface (B8)
	Table (A2)	_		s (B15) (LRR U)	_	Drainage Pat		
Saturation		_		Ifide Odor (C1)	_	 Moss Trim Li		
Water Mar		_		zospheres on Living	Roots(C3)		Nater Table (0	C2)
Sediment [Deposits (B2)	_		Reduced Iron (C4)		crayfish Burr	,	,
Drift Depos		_	Recent Iron R	Reduction in Tilled S	Soils (C6)		sible on Aerial	Imagery (C9)
	r Crust (B4)	_	Thin Muck Su	urface (C7)	` ′ -	Geomorphic		
Iron Depos	its (B5)	_	Other (Explain	in in Remarks)	_	Shallow Aqui	tard (D3)	
Inundation	Visible on Aeria	al Imagery (B7)			_	FAC-Neutral	Test (D5)	
	ned Leaves (B9				_	 Sphagnum m	oss (D8) (LRF	₹ T, U)
Field Observations:								
Surface Water Prese	nt? Yes		Depth (inch	nes): N/A				
Water Table Present	? Yes	NoX	Depth (inch	nes): <u>>20</u>				
Saturation Present?	Yes	No X	Depth (inch	nes): <u>>20</u>	Wetland Hydr	ology Present?	Yes	_ NoX
(includes capillary frin	<u> </u>		11					
Describe Records	d Data (stream	ı gauge, monitoring	well, aerial photos	, previous inspection	ns), if available:			
Remarks:								
No positive indica	tion of wetland	hydrology was obs	erved.					

Name Observed			Absolute	Dominant	Indicator	Dominance Test worksheet:	_
None Observed	Tree Stratum (Plot size:	30 ft)				Number of Dominant Species	
2 Total Number of Dominant Species Across All Straits:	4. Name Observed		70 00 001	<u>орожов.</u>	Otatao	•	
Total Number of Dominant Species Common Co		•				That Ale OBE, I AOW, OI I AO.	
Species Across All Strata: 2						T. (1) (5)	
Percent of Dominant Species							
Percent of Daminant Species That Are OBLE, FACW, or FAC 100% (AB)						Species Across All Strata: 2 (B)	
Sapiling Stratum (Plot size:	5						
Saping Stratum (Plot size: 30 ft.)	6					Percent of Dominant Species	
Name			0	= Total Cover		That Are OBL, FACW, or FAC: 100% (A/B)	
Total % Cover of:		50% of total cover:	0	20% of total cover:	0		
None Observed	Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
2. 3. 3.	· - · · —					Total % Cover of: Multiply by:	
\$ FACW species 0							
## FAC Species Section					_		
FACU species 0						· — — — — — — — — — — — — — — — — — — —	
Column Totals: 10							
Column Totals: 125 (A) 355 (B)	5						
Shrub Stratum (Plot size: 30 ft.) Schinus terebinthifolia S	6					UPL species 10 x 5 = 50	
Shrub Stratum			0	= Total Cover		Column Totals:125 (A)355 (B	3)
1. Schinus terebinthifolia 2.		50% of total cover:	0	20% of total cover:	0		
2 3 3 5 5 5 5 5 5 5 5	Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = 2.84	
3.	1. Schinus terebinthifolia		5	Yes	FAC		
3.	2.					Hydrophytic Vegetation Indicators:	
X 2 - Dominance Test is >50% X 3 - Prevalence Index is \$ 3.0¹					_		
5. Some statements of the st					-		
Problematic Hydrophytic Vegetation (Explain)							
Formula Form							ļ
Some of total cover: 2.5 20% of total cover: 1 1 1 1 1 1 1 1 1	0					Problematic Hydrophytic Vegetation (Explain)	ļ
Herb Stratum (Plot size: 30 ft.) 1. Muhlenbergia schreberi						1	
1. <u>Muhlenbergia schreberi</u> 70			2.5	20% of total cover:	1		ļ
2. Spartina spartinae 2. No OBL 3. Helianthus annuus 4. Opuntia engelmannii 10 No UPL 5. Ambrosia psilostachya 6. Sapling - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) OPBH. Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine - All woody vines, regardless of height. Hydrophytic Vegetation Present? Yes X No	Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	4
3. Helianthus annuus 4. Opuntia engelmannii 5. Ambrosia psilostachya 6. Sapling - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine - All woody vines, regardless of height. Woody vine - All woody vines, regardless of height. Hydrophytic Vegetation Present? Yes X No	Muhlenbergia schreberi		70	Yes	FAC	Definitions of Five Vegetation Strata:	
4. Opuntia engelmannii 10 No UPL 5. Ambrosia psilostachya 5 No FAC 6. Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. 9. Shrub - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 20 ft (1 to 6 m) in height. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody Vine - All woody vines, regardless of height. Woody vine - All woody vines, regardless of height. Woody vine - All woody vines, regardless of height. Hydrophytic Vegetation Present? Yes X No Remarks: (if observed, list morphological adaptations below).	2. Spartina spartinae		20	No	OBL	Tree - Woody plants, excluding woody vines,	ļ
5 No FAC 6.	3. Helianthus annuus		15	No	FAC	approximately 20 ft (6m) or more in height and 3 in.	
Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine - All woody vines, regardless of height. Woody vine - All woody vines, regardless of height. Hydrophytic Vegetation Present? Yes X No	4. Opuntia engelmannii		10	No	UPL	(7.6 cm) or larger in diameter at breast height (DBH).	
7. approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. 9. approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Woody Vine Stratum (Plot size: 30 ft.) 1. None Observed 2. 3. 4. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5.	5. Ambrosia psilostachya		5	No	FAC		
7	6.	_				Sapling - Woody plants, excluding woody vines,	
8						approximately 20 ft (6 m) or more in height and less	ļ
9						than 3 in. (7.6 cm) DBH.	
Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. 120					-		
approximately 3 to 20 ft (1 to 6 m) in height. 120						Shrub - Woody plants, excluding woody vines.	ļ
120	14.	-				31 7	ļ
Solid cover: 60 20% of total cover: 24 Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine - All woody vines, regardless of height.	11.		400	T-1-1-0			ļ
Moody Vine Stratum (Plot size: 30 ft.) 1. None Observed 2.						Harb All harbaconus (non woody) plants, including	ļ
1. None Observed 2			60	20% of total cover:	24	, , , , , , ,	ļ
2	Woody Vine Stratum (Plot size:	30 ft.)					ļ
3	1. None Observed						
4	2					3 ft (1 m) in height.	ļ
4	3						ļ
O						Woody vine - All woody vines, regardless of height.	ļ
O							ļ
50% of total cover: 0 20% of total cover: 0 Vegetation Present? Yes X No Remarks: (if observed, list morphological adaptations below).			0	= Total Cover		Hydrophytic	
Present? Yes X No Remarks: (if observed, list morphological adaptations below).		50% of total cover:			0		
Remarks: (if observed, list morphological adaptations below).						_	
						<u> </u>	ļ
	Pamarke: (if absorved list m	orphological adaptati	one holow	١			\dashv
A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).	rtemarks. (ii observed, list m	orpriological adaptati	OLIS DEIOW).			ļ
	A positive indication of hydrop	ohytic vegetation was	observed	(>50% of dominant	species index	xed as OBL, FACW, or FAC).	

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Desc	•	to the depth	needed to docu			onfirm the abs	sence of indicators.)	
Depth	Matrix			Redox F	eatures			
(inches)	Color (moist)		Color (moist)	%	Type¹	Loc ²	Texture	Remarks
0-20	10YR 5/2	85_	10YR 4/6	<u>15</u>	C	M	Sandy Clay	
	-		_		•		-	
1Type: C=C	oncentration, D=Dep	letion RM=R	aduced Matrix M	 IS=Masker		² Location: F	PL=Pore Lining, M=Mat	riv
	s Indicators: (Appli					Location. F	<u>*</u>	plematic Hydric Soils ³ :
•	,	cable to all L	-		•	DD C T III		<u>-</u>
Histoso	, ,				Surface (S8) (L	· · · · ·	1 cm Muck (A9	• • •
	pipedon (A2)				e (S9) (LRR S,	· ·	2 cm Muck (A1	* *
	listic (A3)			-	neral (F1) (LRR	(0)		c (F18) (outside MLRA 150A,B)
	en Sulfide (A4)			Gleyed Ma				dplain Soils (F19) (LRR P, S, T)
	ed Layers (A5)		Deplete	ed Matrix (I	F3)		Anomalous Bri	ght Loamy Soils (F20)
Organic	Bodies (A6) (LRR I	P, T, U)	Redox	Dark Surfa	ice (F6)		(MLRA 153B)	
5 cm M	lucky Mineral (A7) (L	RR P, T, U)	Deplete	ed Dark Su	ırface (F7)		Red Parent Ma	aterial (TF2)
Muck P	Presence (A8) (LRR I	J)	Redox	Depression	ns (F8)		Very Shallow [Dark Surface (TF12)
1 cm M	luck (A9) (LRR P, T)		Marl (F	10) (LRR I	J)		Other (Explain	in Remarks)
Deplete	ed Below Dark Surface	ce (A11)	Deplete	ed Ochric (F11) (MLRA 1	51)		
Thick D	Oark Surface (A12)		Iron-Ma	anganese I	Masses (F12) (LRR O, P, T)	³ Indicators o	f hydrophytic vegetation and
Coast F	Prairie Redox (A16) (MLRA 150A)	Umbric	Surface (F	13) (LRR P, T	, U)		rology must be present,
Sandy	Mucky Mineral (S1) (LRR O, S)	Delta C	chric (F17) (MLRA 151)		unless distu	rbed or problematic.
	Gleyed Matrix (S4)			,	18) (MLRA 15	0A. 150B)		
X Sandy	. , ,				ain Soils (F19)	· ·		
	d Matrix (S6)				, ,	-	9A, 153C, 153D)	
	urface (S7) (LRR P,	S T II)		Dg	(.	20) (2.011	.,,,	
Bark 6	unace (or) (Errich,	0, 1, 0,						
Restrictive	Layer (if observed)	:						
Type:								
Depth (in						Hydri	c Soil Present? Yes	X No
	,							
Remarks:						ļ.		
Noman.								
A nositive in	dication of hydric soi	l was observe	d					
7 C POOLATO III	aloation of Hydrio ool	0500. 70	u .					

Project/Site:	,	Bluewater SPM		County:	Nueces	Sampling	Date: Ja	anuary 31, 2019
Applicant/Owner:		Lloyd Engi	neering	Sta			Point:	•
Investigator(s):	E. Munsche		J. Mitchell	Section, Townshi		·	N/A	
Landform (hillslope, ter			ie	Local relief (conc	ave, convex, nor	ne): None	Slope (%):	0-5
Subregion (LRR or ML	RA):	T		Lat:27.8	352317 Loi	ng: <u>-97.07537</u>	2 Datum	North American Datum 1983
Soil Map Unit Name:	Mustang fi	ne sand, 0 to 1 perc	cent slopes, occasi	onally flooded, freq	uently ponded	NWI Classification:		N/A
Are climatic / hydrologi	c conditions on	the site typical for t	his time of year?	(Yes / No)	No	(if no, explain in Re	marks.)	
Are Vegetation	No,Soil	No ,or Hydrolog		-	Are "Normal Ci	ircumstances" prese	nt? Yes	No
Are Vegetation	No,Soil	No ,or Hydrolog	gy No natur	rally problematic?	(If ne	eeded, explain any a	inswers in Rer	narks.)
SUMMARY OF F	INDINGS -	Attach site m	ap showing s	sampling poir	nt locations,	transects, im	portant fe	atures, etc.
Hydrophytic Vegetation	n Present?	Yes	NoX					
Hydric Soil Present?		Yes		Is the Samp	oled Area			
Wetland Hydrology P	resent?	Yes	No X	within a We	etland?	Yes	No	X
Remarks:								
This point was de	termined not to	be within a wetland	d due to the lack of	all three wetland co	riteria.			
The survey area	vas determined	d to be wetter than n	ormal at the time o	of survey.				
HYDROLOGY								
Wetland hydrolo	gy Indicators:					Secondary Indicato	rs (minimum c	of two required)
Primary Indicators	(minimum of c	one is required; chec	ck all that apply)		•	Surface Soil		
Surface Wa	•	•	Aquatic Fauna	a (B13)		—— Sparsely Veg	getated Conca	ve Surface (B8)
High Water	Table (A2)	_	Marl Deposits	(B15) (LRR U)		Drainage Pat	tterns (B10)	
Saturation	(A3)	_	Hydrogen Sul	fide Odor (C1)		Moss Trim Li	nes (B16)	
Water Mark	is (B1)	_	Oxidized Rhiz	ospheres on Living	Roots(C3)	Dry-Season \	Water Table (0	C2)
Sediment D	eposits (B2)	_	Presence of F	Reduced Iron (C4)		Crayfish Burr	ows (C8)	
Drift Depos	its (B3)	_	Recent Iron R	teduction in Tilled S	Soils (C6)	Saturation Vi	sible on Aerial	I Imagery (C9)
Algal Mat o	r Crust (B4)	_	Thin Muck Su			Geomorphic	Position (D2)	
Iron Depos		_	Other (Explain	n in Remarks)		Shallow Aqui		
		al Imagery (B7)				FAC-Neutral	, ,	
Water-Stail	ned Leaves (B9	")				Sphagnum m	noss (D8) (LRF	₹ I, U)
Field Observations:								
Surface Water Prese	nt? Yes	No X	Depth (inch	es): N/A				
Water Table Present		No X	· ·	<i>'</i>				
Saturation Present?	Yes	No X	Depth (inch	es): >20	Wetland Hydi	rology Present?	Yes	NoX
(includes capillary frin	ge)							
Describe Recorde	d Data (stream	n gauge, monitoring	well, aerial photos,	previous inspectio	ns), if available:			
D								
Remarks:								
No positive indica	tion of wetland	hydrology was obse	erved.					
'		, 3,						

		Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:	30 ft \	% cover	Species?	Status	Number of Dominant Species
1 Name Observed		70 00 001	Орсоюз	Otatas	•
					That Are OBL, FACW, or FAC:1 (A)
2					
3					Total Number of Dominant
4					Species Across All Strata: (B)
5					
6					Percent of Dominant Species
		0	= Total Cover		That Are OBL, FACW, or FAC: 33% (A/B)
	50% of total cover:	0	20% of total cover:	0	
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:
1. None Observed					Total % Cover of: Multiply by:
2.					OBL species 0 x 1 = 0
3.				-	FACW species 0 x 2 = 0
					FAC species 55 x 3 = 165
4					
5					
6					UPL species
			= Total Cover		Column Totals:115 (A)450 (B)
	50% of total cover:	0	20% of total cover:	0	
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = 3.91
1. Prosopis glandulosa		10	Yes	UPL	
2					Hydrophytic Vegetation Indicators:
3					1 - Rapid Test for Hydrophytic Vegetation
4.			· · · · · · · · · · · · · · · · · · ·		2 - Dominance Test is >50%
5.					3 - Prevalence Index is ≤ 3.0 ¹
6.					Problematic Hydrophytic Vegetation ¹ (Explain)
o		10	= Total Cover		(Zipiaii)
	EOO/ of total covers		20% of total cover:	2	¹ Indicators of hydric soil and wetland hydrology must
Hards Christian (District	50% of total cover:		20% of total cover:	2	
Herb Stratum (Plot size:	30 ft.)	40	V.	E40	be present, unless disturbed or problematic.
1. Muhlenbergia schreberi		40	Yes	<u>FAC</u>	Definitions of Five Vegetation Strata:
2. Opuntia engelmannii		15	No	UPL	Tree - Woody plants, excluding woody vines,
3. Helianthus annuus		15	No	<u>FAC</u>	approximately 20 ft (6m) or more in height and 3 in.
4. Oenothera drummondii		20	Yes	UPL	(7.6 cm) or larger in diameter at breast height (DBH).
5. Schizachyrium scoparium		15	No	FACU_	
6					Sapling - Woody plants, excluding woody vines,
7					approximately 20 ft (6 m) or more in height and less
8.					than 3 in. (7.6 cm) DBH.
9.			·		
10.					Shrub - Woody plants, excluding woody vines,
11.					approximately 3 to 20 ft (1 to 6 m) in height.
		105	= Total Cover		
	50% of total cover		20% of total cover:	21	Herb - All herbaceous (non-woody) plants, including
Moody Vine Streture (Diet :	50% of total cover:	JZ.U	20% OF LOCAL COVER:		herbaceous vines, regardless of size, and woody
Woody Vine Stratum (Plot size:	30 II.)				plants, except woody vines, less than approximately
1. None Observed					3 ft (1 m) in height.
2	·				3 it (1 iii) iii neight.
3					
4					Woody vine - All woody vines, regardless of height.
5					
		0	= Total Cover		Hydrophytic
	50% of total cover:	0	20% of total cover:	0	Vegetation
					Present? Yes No X
Remarks: (if observed, list mo	orphological adaptati	ons below).		-
•		,			
No positive indication of hydro	phytic vegetation wa	s observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).

Depth	Matrix			Redox F	eatures			
inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-16	10YR 6/3	98	10YR 6/6	2	C		Sandy Loam	
Type: C=0	Concentration, D=Dep	letion, RM	l=Reduced Matrix, N	//S=Masked	Sand Grains.	² Location: F	PL=Pore Lining, M=Matrix	Χ.
lydric Soi	ls Indicators: (Appl	cable to a	all LRRs, unless of	herwise no	oted.)		Indicators for Proble	ematic Hydric Soils ³ :
Histos	ol (A1)		Polyva	lue Below S	Surface (S8) (L l	RR S, T, U)	1 cm Muck (A9)	(LRR O)
Histic	Epipedon (A2)		Thin D	ark Surface	(S9) (LRR S,	T, U)	2 cm Muck (A10) (LRR S)
Black	Histic (A3)		Loamy	Mucky Min	eral (F1) (LRR	O)	Reduced Vertic	(F18) (outside MLRA 150A
Hydro	gen Sulfide (A4)		Loamy	Gleyed Ma	trix (F2)		Piedmont Flood	plain Soils (F19) (LRR P, S,
Stratif	ied Layers (A5)		Deplet	ed Matrix (F	3)		Anomalous Brigl	ht Loamy Soils (F20)
Organ	ic Bodies (A6) (LRR I	P, T, U)	Redox	Dark Surfa	ce (F6)		(MLRA 153B)	
5 cm l	Mucky Mineral (A7) (L	RR P, T, l	J) Deplet	ed Dark Su	rface (F7)		Red Parent Mate	erial (TF2)
	Presence (A8) (LRR	-		Depression	. ,		Very Shallow Da	ark Surface (TF12)
1 cm l	Muck (A9) (LRR P, T)			10) (LRR L			Other (Explain in	n Remarks)
Deple	ted Below Dark Surfa	ce (A11)	Deplet	ed Ochric (I	F11) (MLRA 1 5	51)		
Thick	Dark Surface (A12)		Iron-M	anganese N	/lasses (F12) (LRR O, P, T)		hydrophytic vegetation and
Coast	Prairie Redox (A16) (MLRA 15	DA) Umbrid	Surface (F	13) (LRR P, T ,	, U)	,	ology must be present, bed or problematic.
Sandy	Mucky Mineral (S1)	LRR O, S) Delta (Ochric (F17)	(MLRA 151)		unices disturb	red of problematic.
Sandy	Gleyed Matrix (S4)		Reduc	ed Vertic (F	18) (MLRA 15 0	0A, 150B)		
Sandy	Redox (S5)		Piedm	ont Floodpla	ain Soils (F19)	(MLRA 149A)		
Stripp	ed Matrix (S6)		Anoma	lous Bright	Loamy Soils (F	² 20) (MLRA 1 4	19A, 153C, 153D)	
Dark S	Surface (S7) (LRR P,	S, T, U)						
Restrictive	Layer (if observed)	:						
Type:								
Depth (i						Hydri	ic Soil Present? Yes	No X
	,					1	_	
Remarks:								
lo positive	indication of hydric se	oils was ob	served.					

Project/Site: Bluewater SPM County: Nucces Sampling Date: January 31, 2019 Applicant/Owner: Lloyd Engineering State: Taxas Sample Point: DPA044 PEM Investigator(s): E. Munscher and J. Mitchell Section, Township, Range: NA Applicant/Owner (Investigator(s): E. Munscher and J. Mitchell Section, Township, Range: NA Applicant/Owner (Investigator(s): Marsh, Saltwater
Investigator(s): E. Murscher and J. Milchell Section, Township, Ranger N/A
Landform (hillslope, terrace, etc.):
Subregion (LRR or MLRA): T
Soil Map Unit Name: Mustang fine sand, 0 to 1 percent slopes, occasionally flooded, frequently ponded Are climatic / hydrologic conditions on the site typical fine time of year? (Yes / No) No (Iff no, explain in Remarks.) Are Vegetation No Soil No or Hydrology No asynflicantly disturbed? Are Thormal Circumstances' present? Yes X No Are Vegetation No Soil No or Hydrology No anaturally problematic? (Iff needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes X No
Are Vegetation No Soil No or Hydrology No aignificantly disturbed? Are "Normal Circumstances" present? Yes X No Are Vegetation No Soil No or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes X No
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(includes capillary fringe)
Describe Recorded Data (stream gauge, monitoring well, aerial priotos, previous inspections), il available.
Remarks:
A positive indication of wetland hydrology was observed (at least one primary indicator).
Other: Aerenchyma tissue on <i>Tamarix ramosissima</i> .

Sampling Point:	DPA044_PEM

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft)	% cover	Species?	Status	Number of Dominant Species	
		70 00 101	_ороскоо.	Otatao	That Are OBL, FACW, or FAC: 2	(A)
					That Ale OBL, I AOW, OI I AO.	(^)
2					T. A. I. N. and J. C.	
3.					Total Number of Dominant	(D)
4					Species Across All Strata:	(B)
5						
6					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC:100%	(A/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1. None Observed					Total % Cover of: Multiply by:	
2.	<u>.</u>				OBL species 95 x 1 = 95	
3.					FACW species 15 x 2 = 30	
4.					FAC species 5 x 3 = 15	
					FACU species 0 x 4 = 0	_
5					UPL species 0 x 5 = 0	
6	-		= Total Cover			— _(B)
	500/ 51 1			•	Column Totals:115 (A)140	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = 1.22	
1. Tamarix ramosissima		5	Yes	FACW		
2					Hydrophytic Vegetation Indicators:	
3					1 - Rapid Test for Hydrophytic Vegetation	
4					X 2 - Dominance Test is >50%	
5.					X 3 - Prevalence Index is ≤ 3.0 ¹	
6.					Problematic Hydrophytic Vegetation ¹ (Explain)	
		5	= Total Cover			
	50% of total cover:		20% of total cover:	1	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:			20% of total cover.		be present, unless disturbed or problematic.	
		80	Voc	OPI		
Typha latifolia			Yes	OBL	Definitions of Five Vegetation Strata:	
2. Eleocharis minima		15	No	OBL	Tree - Woody plants, excluding woody vines,	
3. Cyperus entrerianus		5	No	FACW	approximately 20 ft (6m) or more in height and 3 in.	
4. Andropogon glomeratus		5	No	FACW	(7.6 cm) or larger in diameter at breast height (DBH).	
5. Helianthus annuus		5	No	FAC_		
6					Sapling - Woody plants, excluding woody vines,	
7					approximately 20 ft (6 m) or more in height and less	
8					than 3 in. (7.6 cm) DBH.	
9.						
10.					Shrub - Woody plants, excluding woody vines,	
11.					approximately 3 to 20 ft (1 to 6 m) in height.	
-		110	= Total Cover			
	50% of total cover:		20% of total cover:	22	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Diet size)			20 % Of total cover.		herbaceous vines, regardless of size, and woody	
Woody Vine Stratum (Plot size:					plants, except woody vines, less than approximately	
1. None Observed					3 ft (1 m) in height.	
2					3 it (1 iii) iii neight.	
3					We also does Allowed by the control of both A	
4	-				Woody vine - All woody vines, regardless of height.	
5						
		0	= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes X No	
Remarks: (if observed, list m	orphological adaptati	ons below).			
•			,			
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	species inde	xed as OBL, FACW, or FAC).	
A positive indication of hydrop	hytic vegetation was	observed	(Prevalence Index is	$s \le 3.00$).		

Depth	Matrix			Redox I	eatures			
inches)	Color (moist)	%	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks
0-16	5GY 4/1	98	10YR 5/6	2	С	M	Sandy Clay	
		<u> </u>						
								
Type: C=C	oncentration, D=Dep	letion RM	=Reduced Matrix N	MS=Maske	d Sand Grains	² I ocation: P	 L=Pore Lining, M=Mat	rix
	s Indicators: (Appl					Location. 1		olematic Hydric Soils ³ :
•	,	icable to a	•		Surface (S8) (L	DD C T III	1 cm Muck (As	
Histoso	• •				, , ,	· · · · · · ·	2 cm Muck (A1	
	Epipedon (A2)				e (S9) (LRR S,			* * * *
	Histic (A3)			-	neral (F1) (LRF	(0)		c (F18) (outside MLRA 150A,
	en Sulfide (A4)			Gleyed M				dplain Soils (F19) (LRR P, S,
	ed Layers (A5)			ed Matrix (,			ght Loamy Soils (F20)
	c Bodies (A6) (LRR I	· · · ·		Dark Surf			(MLRA 153B)	
	lucky Mineral (A7) (L				urface (F7)		Red Parent Ma	
	Presence (A8) (LRR	•		Depression				Dark Surface (TF12)
	luck (A9) (LRR P, T)			=10) (LRR	-		Other (Explain	in Remarks)
Deplete	ed Below Dark Surfa	ce (A11)			(F11) (MLRA 1	•	2	
	Dark Surface (A12)			•	Masses (F12)			of hydrophytic vegetation and
Coast F	Prairie Redox (A16) (MLRA 150	DA) Umbrid	c Surface (F13) (LRR P, T	, U)		rology must be present, rbed or problematic.
Sandy	Mucky Mineral (S1) ((LRR O, S)	Delta (Ochric (F17	7) (MLRA 151)		di licos dista	ibod of problematio.
X Sandy	Gleyed Matrix (S4)		Reduc	ed Vertic (F18) (MLRA 15	0A, 150B)		
X Sandy	Redox (S5)		Piedm	ont Floodp	lain Soils (F19)	(MLRA 149A)		
Strippe	d Matrix (S6)		Anoma	alous Brigh	t Loamv Soils (F20) (MLRA 149	A, 153C, 153D)	
	\ -/				, ,			
Restrictive	urface (S7) (LRR P, Layer (if observed)	: :						
	urface (S7) (LRR P, Layer (if observed)	: :				Hydric	Soil Present? Yes	X No
Restrictive Type: Depth (in	urface (S7) (LRR P, Layer (if observed)	: :				Hydrid	Soil Present? Yes	X No
Restrictive Type: Depth (in	urface (S7) (LRR P, Layer (if observed)	: :				Hydrid	: Soil Present? Yes	XNo
Restrictive Type: Depth (in	urface (S7) (LRR P, Layer (if observed) nches):	:				Hydrid	: Soil Present? Yes	XNo
Restrictive Type: Depth (in	urface (S7) (LRR P, Layer (if observed)	:				Hydrid	: Soil Present? Yes	XNo
Restrictive Type: Depth (in	urface (S7) (LRR P, Layer (if observed) nches):	:				Hydrid	Soil Present? Yes	XNo
Restrictive Type: Depth (in	urface (S7) (LRR P, Layer (if observed) nches):	:				Hydrid	Soil Present? Yes	XNo
Restrictive Type: Depth (in	urface (S7) (LRR P, Layer (if observed) nches):	:				Hydric	Soil Present? Yes	X No
Restrictive Type: Depth (in	urface (S7) (LRR P, Layer (if observed) nches):	:				Hydrid	Soil Present? Yes	XNo
Restrictive Type: Depth (in	urface (S7) (LRR P, Layer (if observed) nches):	:				Hydrio	Soil Present? Yes	X No
Restrictive Type: Depth (in	urface (S7) (LRR P, Layer (if observed) nches):	:				Hydrid	Soil Present? Yes	X No
Restrictive Type: Depth (in	urface (S7) (LRR P, Layer (if observed) nches):	:				Hydrid	Soil Present? Yes	X No
Restrictive Type: Depth (in	urface (S7) (LRR P, Layer (if observed) nches):	:				Hydrid	Soil Present? Yes	XNo
Restrictive Type: Depth (in	urface (S7) (LRR P, Layer (if observed) nches):	:				Hydrid	Soil Present? Yes	XNo
Restrictive Type: Depth (in	urface (S7) (LRR P, Layer (if observed) nches):	:				Hydrid	Soil Present? Yes	XNo
Restrictive Type: Depth (in	urface (S7) (LRR P, Layer (if observed) nches):	:				Hydrid	Soil Present? Yes	XNo
Restrictive Type: Depth (in	urface (S7) (LRR P, Layer (if observed) nches):	:				Hydrid	Soil Present? Yes	XNo
Restrictive Type: Depth (in	urface (S7) (LRR P, Layer (if observed) nches):	:				Hydrid	Soil Present? Yes	XNo
Restrictive Type: Depth (in	urface (S7) (LRR P, Layer (if observed) nches):	:				Hydrid	Soil Present? Yes	X No
Restrictive Type: Depth (in	urface (S7) (LRR P, Layer (if observed) nches):	:				Hydrid	Soil Present? Yes	XNo
Restrictive Type: Depth (in	urface (S7) (LRR P, Layer (if observed) nches):	:				Hydrid	Soil Present? Yes	XNo
Restrictive Type: Depth (in	urface (S7) (LRR P, Layer (if observed) nches):	:				Hydrid	Soil Present? Yes	XNo
Restrictive Type: Depth (in	urface (S7) (LRR P, Layer (if observed) nches):	:				Hydrid	Soil Present? Yes	X No
Restrictive Type: Depth (in	urface (S7) (LRR P, Layer (if observed) nches):	:				Hydrid	Soil Present? Yes	XNo
Restrictive Type: Depth (in	urface (S7) (LRR P, Layer (if observed) nches):	:				Hydrid	Soil Present? Yes	X No
Restrictive Type: Depth (in	urface (S7) (LRR P, Layer (if observed) nches):	:				Hydrid	Soil Present? Yes	XNo
Restrictive Type: Depth (in	urface (S7) (LRR P, Layer (if observed) nches):	:				Hydrid	Soil Present? Yes	XNo

Project/Site:	Blu	ewater SPM	C	county:	Nueces	Sampling	Date∙ Ja	nuary 31,	2019
Applicant/Owner:		Lloyd Enginee		Stat			Point:	DPA045	
Investigator(s):	E. Munscher			Section, Township	·	Campio i	N/A	<u> </u>	
Landform (hillslope, ter				ocal relief (conca	· · · —	ne): None	Slope (%):		0-5
Subregion (LRR or MLI		Т				ng: <u>-97.07491</u>	,	North Amer	ican Datum 1983
Soil Map Unit Name:		sand, 0 to 1 percen				NWI Classification:		N/A	
Are climatic / hydrologic	c conditions on the	site typical for this	time of year?	(Yes / No)	No	(if no, explain in Rei	marks.)		
Are Vegetation	No ,Soil No	o,or Hydrology	No significa	antly disturbed?	Are "Normal Cir	rcumstances" prese	nt? Yes	X No	·
Are Vegetation	No ,Soil No	o ,or Hydrology	Nonaturall	y problematic?	(If ne	eded, explain any a	nswers in Rem	narks.)	
SUMMARY OF F	INDINGS - A	ttach site mar	showing sa	mpling poin	t locations,	transects, imp	portant fea	atures,	etc.
		<u>.</u>		1		<u> </u>	•		
Hydrophytia Vagotatia	on Procent?	Voc	No. Y						
Hydrophytic Vegetation Hydric Soil Present?		Yes Yes	No X	Is the Samp	lad Araa				
Wetland Hydrology Pi		Yes	No X	within a We		Yes	No	X	
Welland Trydrology Tr	CSCIII:		<u> </u>	Within a We	.iuiiu i	103			_
Remarks:				<u>'</u>					
This point was de	termined not to be	within a wetland du	ie to the lack of all	three wetland cri	iteria				
This point was de	emined not to be	Within a Wetland do	ie to the lack of all	tillee wetland on	teria.				
The survey area v	vas determined to	be wetter than norn	nal at the time of s	survev.					
	, 40 4010	Do Mottor trial. Heri							
HIVEROL COV									
HYDROLOGY Wetland hydrolo	av Indicatore:								
-		:	-11 4641-3			Secondary Indicator		two requi	red)
		is required; check a		D12\		Surface Soil (ıa Curfaaa	(D0)
Surface Wa High Water	` ,		Aquatic Fauna (I Marl Deposits (B	·	-	Sparsely veg Drainage Pat	etated Conca\ torns (B10)	e Suriace	: (DO)
Saturation (Hydrogen Sulfide		-	Moss Trim Lii			
Water Mark				pheres on Living	Roots(C3)		Vater Table (C	:2)	
	eposits (B2)		Presence of Rec	-	110013(00)	Crayfish Burn	,	<i>,</i> _)	
Drift Depos			-	luction in Tilled S	oils (C6)		sible on Aerial	Imagery (C9)
Algal Mat o	, ,		Thin Muck Surfa		5113 (00)	Geomorphic I		inagery (00)
Iron Deposi	, ,	-	Other (Explain in	, ,	-	Shallow Aquit	, ,		
	Visible on Aerial In	nagery (B7)			-	FAC-Neutral			
	ned Leaves (B9)	lagory (D1)			-		oss (D8) (LRF	2 T. U)	
	.54 254755 (25)				-	op.iag.ia.ii	333 (23) (2 111	, .,	
Field Observations:									
Surface Water Preser	nt? Yes	No X	Depth (inches)): <u>N/A</u>					
Water Table Present?	Yes	NoX	Depth (inches)): >20					
Saturation Present?	Yes	NoX	Depth (inches)): >20	Wetland Hydr	rology Present?	Yes	_ No	X
(includes capillary frin	ge)								
Describe Recorde	d Data (stream ga	auge, monitoring wel	II, aerial photos, pr	revious inspectior	ns), if available:				
Remarks:									
Remarks:									
No positive indica	tion of wetland hvo	drology was observe	ed.						
		9)							

		Absolute	Dominant	Indicator	Dominance Test w	orksheet:		
Tues Churchium (Diet sies)	20 # \							
Tree Stratum (Plot size:	<u>30 π.</u>)	% cover	Species?	Status	Number of Dominar	•	_	
					That Are OBL, FAC	W, or FAC: _	2	(A)
2								
3					Total Number of Do	minant		
4					Species Across All	Strata:	4	(B)
5.						_		` '
6.					Percent of Dominar	nt Species		
0			= Total Cover			•	50%	(A/D)
			•	_	That Are OBL, FAC	W, OI FAC	50 %	(A/B)
	50% of total cover:	0	20% of total cover:	0	Prevalence Index	Markabaati		
Sapling Stratum (Plot size:	30 ft.)				Prevalence index	worksneet:		
1. None Observed					Total % C	cover of:	Multiply by	<u> </u>
2					OBL species	0	x 1 =0	
3					FACW species	0	x 2 = 0	
4.					FAC species	40	x 3 = 120	
					FACU species	25	x 4 = 100	
5						-		
6					UPL species	30	x 5 = 150	
		-	= Total Cover		Column Totals: _	95	(A) <u>370</u>	(B)
	50% of total cover:	0	20% of total cover:	0				
Shrub Stratum (Plot size:	30 ft.)				Prevalence	e Index = B/A =	3.89	
1. None Observed								
2.					Hydrophytic Vege	tation Indicato	rs:	
3.							nytic Vegetation	
				-		ince Test is >50	-	
4						ence Index is ≤ 3		
5								,
6					Problemati	c Hydropnytic v	egetation ¹ (Explain)
			= Total Cover					
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydr	ic soil and wetla	and hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless	disturbed or pro	blematic.	
1. Schizachyrium scoparium		25	Yes	FACU_	Definitions of Five	Vegetation St	rata:	
2. Oenothera drummondii		20	Yes	UPL	Tree - Woody plan	ts, excluding wo	oody vines,	
3. Helianthus annuus		15	Yes	FAC	approximately 20 ft	(6m) or more in	height and 3 in.	
Muhlenbergia schreberi	_	15	Yes	FAC	(7.6 cm) or larger in	, ,	=	
Ambrosia psilostachya		10	No No	FAC	(7.0 onl) or larger in	diameter at bre	sast neight (BBH).	
-	-	10			Sapling - Woody p	lants excluding	woody vines	
6. Opuntia engelmannii			No	<u>UPL</u>	approximately 20 ft	-	-	
7			· -		than 3 in. (7.6 cm) [Theight and 1000	
8					man 5 m. (7.0 cm) L	льп.		
9								
10					Shrub - Woody pla		•	
11					approximately 3 to 2	20 ft (1 to 6 m) i	n height.	
		95	= Total Cover					
	50% of total cover:		20% of total cover:	19	Herb - All herbaceo	us (non-woody)) plants, including	
Woody Vine Stratum (Plot size:					herbaceous vines, r	egardless of siz	ze, <u>and</u> woody	
1. None Observed					plants, except wood	lv vines. less th	an approximately	
			·		3 ft (1 m) in height.	•	,, ,	
2					o it (:, iio.g.ii.			
3					Mandy vine All w	aaduuinaa raa	ardlaga of baight	
4					Woody vine - All w	oody villes, leg	ardiess of fielgrit.	
5								
		0	= Total Cover		Hydrophytic			
	50% of total cover:	0	20% of total cover:	0	Vegetation			
			•		Present?	Yes	No X	
Remarks: (if observed, list mo	orphological adaptati	ions helow)					
Remarks. (ii observed, list mo	orpriological adaptati	ions below).					
No positive indication of hydro	phytic vegetation wa	as observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).			
•					·			

Depth	Matrix			Redox F	eatures						
(inches)	Color (moist)	_%_	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks			
0-16	10YR 6/3	98	10YR 6/6_	2	C	M	Sandy Clay				
						2	. 				
	Concentration, D=Dep					² Location: P	L=Pore Lining, M=Matrix	•			
•	s Indicators: (Appl	icable to	•		,	···		ematic Hydric Soils ³ :			
Histoso	•				Surface (S8) (L		1 cm Muck (A9)	•			
Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U							2 cm Muck (A10)	, , ,			
Black Histic (A3) Loamy Mucky Mineral (F1) (LRR 0)						0)	Reduced Vertic (F18) (outside MLRA 150A,B) Piedmont Floodplain Soils (F19) (LRR P, S, T)				
Hydrogen Sulfide (A4) Loamy Glo					` ,			, , , , , , , , , , , , , , , , , , , ,			
Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Pepleted Matrix (F3) Redox Dark Surface (F6)					,			nt Loamy Soils (F20)			
·	/lucky Mineral (A7) (L				irface (F7)		(MLRA 153B) Red Parent Mate	orial (TE2)			
	Presence (A8) (LRR		· — ·	Depressio	. ,			rk Surface (TF12)			
	fluck (A9) (LRR P, T)	•		10) (LRR	` '		Other (Explain in	` '			
	ed Below Dark Surfa			, ,	5) F11) (MLRA 1 :	(1)	Other (Explain ii)	Tremarks)			
	Dark Surface (A12)	00 (7111)			Masses (F12) (•	³ Indicators of	hydrophytic vegetation and			
	Prairie Redox (A16)	(MLRA 15		•	F13) (LRR P, T			logy must be present,			
	Mucky Mineral (S1)	•	· —	,	') (MLRA 151)	, -,	unless disturbed or problematic.				
	Gleyed Matrix (S4)	, .		•	=18) (MLRA 15	0A, 150B)					
	Redox (S5)			•	ain Soils (F19)						
	ed Matrix (S6)			•	` ,		9A, 153C, 153D)				
Dark S	Surface (S7) (LRR P,	S, T, U)									
Restrictive	Layer (if observed)	:									
	,										
Type: Depth (inches):						Hydri	Soil Present? Yes _	No X			
							_				
Remarks:											
	indication of hydric s										

Project/Site:		Bluewater SPM	l	Co	unty:	Nueces	Sampline	g Date: J	anuary 31, 2	v019
Applicant/Owner:		Lloyd E			Stat			Point:		
Investigator(s):		ner and			ction, Township		<u></u>	N/A	2.7.0.0_0	
Landform (hillslope, terr			Prairie		cal relief (conca	· · · —	one): None	Slope (%):	0.	-5
Subregion (LRR or MLF			None		_Lat:27.8		ong: -97.0770	96 Datum	North America	an Datum 1983
Soil Map Unit Name:	Mustang	fine sand, 0 to 1	percent		<u> </u>	·	NWI Classification	1:	N/A	
Are climatic / hydrologic	conditions o	n the site typical	for this t	ime of year? (Y	'es / No)	No	_(if no, explain in R	emarks.)		
Are Vegetation	No,Soil_	No ,or Hyd	rology _	No significar	itly disturbed?	Are "Normal C	Circumstances" pres	ent? Yes	X No	
Are Vegetation	No,Soil_	No ,or Hyd	rology _	No naturally	problematic?	(If n	eeded, explain any	answers in Re	marks.)	
SUMMARY OF F	NDINGS	- Attach site	e map	showing san	npling poin	t locations	, transects, in	portant fe	atures, e	tc.
								•		
Hydrophytic Vogototic	n Drocont?	Voc		No. V						
Hydrophytic Vegetatio Hydric Soil Present?	i Fieseiit?	Yes YesX		NoX No	Is the Sample	lad Araa				
Wetland Hydrology Pr	esent?	Yes		No X	within a Wet		Yes	No	X	
Wettand Trydrology 1 1	JOHN:	103	_	<u> </u>	Within a voc	uunu .		_ 110_		
Remarks:					•					
This point was det	ermined not t	o he within a we	tland due	to the lack of hyd	ronhytic vegetat	tion and wetlan	d hydrology			
Tino point was dot	ATTIMIOG NOCE	o bo within a wor	uana aac	o to the lack of mya	opriyao vogotat	aon ana wollan	a riyarology.			
The survey area w	as determine	d to be wetter th	an norma	al at the time of su	rvey.					
					•					
HYDROLOGY										
Wetland hydrolog	v Indicators	 s:					Secondary Indicate	oro (minimum d	of two require	04/
Primary Indicators			check all	I that annly)				Cracks (B6)	n two require	(u)
Surface Wa	`	one is required,		Aquatic Fauna (B	13)			getated Conca	ve Surface ((B8)
High Water	` ,			Marl Deposits (B1	•			atterns (B10)	vo canaco (,20)
Saturation (Hydrogen Sulfide			Moss Trim L			
Water Mark	•			Oxidized Rhizospl		Roots(C3)		Water Table (C2)	
Sediment De	eposits (B2)			Presence of Redu	_	` ,	Crayfish Bu	,	,	
Drift Deposit	s (B3)			Recent Iron Redu	ction in Tilled Se	oils (C6)	Saturation \	isible on Aeria	I Imagery (C	9)
Algal Mat or	Crust (B4)			Thin Muck Surfac	e (C7)		Geomorphic	Position (D2)		
Iron Deposit	s (B5)			Other (Explain in I	Remarks)		Shallow Aqu	uitard (D3)		
Inundation \	isible on Aer	ial Imagery (B7)					FAC-Neutra	l Test (D5)		
Water-Stain	ed Leaves (B	9)					Sphagnum	moss (D8) (LR	RT,U)	
Field Observations:										
Surface Water Presen	t2 Voc	No	~	Depth (inches):	N/A					
Water Table Present?		No		Depth (inches):						
Saturation Present?	Yes _	No	<u>x</u>	Depth (inches):		Wetland Hyd	drology Present?	Yes	No 2	x
(includes capillary fring		110		Bopar (monoo).		Trottana nye	arology r rocom.			
Describe Recorde	Data (strea	m gauge, monito	ring well,	, aerial photos, pre	vious inspectior	ns), if available:	:			
	`				·	,				
Remarks:										
N idi i di d		al les ralme l'e au								
No positive indicat	on of wetland	nydrology was	opserved	3.						

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft \	% cover	Species?	Status	Number of Dominant Species	
4. Mana Ohaanaa		70 COVE	Оресіез:	Otatus	·	(A)
					That Ale OBL, FACW, OF FAC.	(A)
2						
3.					Total Number of Dominant	-
4					Species Across All Strata: 3	(B)
5						
6			<u> </u>		Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC:	(A/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1. None Observed					Total % Cover of: Multiply by:	
2.					OBL species 0 x 1 = 0	
3.					FACW species 10 x 2 = 20	
4.			·		FAC species 10 x 3 = 30	
5.					FACU species 30 x 4 = 120	_
6.					UPL species 30 x 5 = 150	
		0	= Total Cover		Column Totals: 80 (A) 320	— (B)
	50% of total cover:		20% of total cover:	0	(7.) <u></u>	(5)
Shrub Stratum (Plot size:			20% Of total cover.		Prevalence Index = B/A = 4.00	
	30 ft.)				Prevalence index – b/A – 4.00	
1. None Observed	-					
2					Hydrophytic Vegetation Indicators:	
3					1 - Rapid Test for Hydrophytic Vegetation	
4					2 - Dominance Test is >50%	
5					3 - Prevalence Index is ≤ 3.0 ¹	
6			<u> </u>		Problematic Hydrophytic Vegetation ¹ (Explain)	
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
1. Schizachyrium scoparium		30	Yes	FACU	Definitions of Five Vegetation Strata:	
2. Opuntia engelmannii		15	Yes	UPL	Tree - Woody plants, excluding woody vines,	
Verbena halei		15	Yes	UPL	approximately 20 ft (6m) or more in height and 3 in.	
4. Andropogon glomeratus		10	No No	FACW	(7.6 cm) or larger in diameter at breast height (DBH).	
5. Ambrosia psilostachya		10	No No	FAC	(7.0 cm) of larger in diameter at breast neight (DDI1).	
				<u> TAC</u>	Sapling - Woody plants, excluding woody vines,	
6					approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8					than 5 in. (7.5 cm) DBH.	
9			<u> </u>		Shrub - Woody plants, excluding woody vines,	
10						
11			· ———		approximately 3 to 20 ft (1 to 6 m) in height.	
		80	= Total Cover			
	50% of total cover:	40	20% of total cover:	16	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:	30 ft)				herbaceous vines, regardless of size, and woody	
1. None Observed			. <u> </u>		plants, except woody vines, less than approximately	
2					3 ft (1 m) in height.	
3.						
4.	<u> </u>				Woody vine - All woody vines, regardless of height.	
5.						
			= Total Cover		Hydrophytic	
	50% of total cover:		20% of total cover:	0	Vegetation	
			,		Present? Yes NoX	
					1103CH1 103H0X	
Pamarks: (if observed list m	arphological adaptati	one below	١			
Remarks: (if observed, list me	orpriological adaptati	ons below).			
No positive indication of hydro	phytic vegetation wa	as observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).	

Depth	Matrix			Redox F	eatures			
inches)	Color (moist)	%	Color (moist)	%_	Type ¹	Loc ²	Texture	Remarks
0-16	10YR 5/2	_96_	10YR 5/8	_2_	C	M	Sandy Clay	
			N 3	_2_	D	M		
Type: C=C	Concentration, D=De	oletion, RM	=Reduced Matrix, N	/IS=Maske	d Sand Grains.	² Location: P	L=Pore Lining, M=Matri	
lydric Soil	s Indicators: (Appl	icable to a	all LRRs, unless ot	herwise n	oted.)		Indicators for Probl	ematic Hydric Soils ³ :
Histoso	ol (A1)		Polyva	lue Below	Surface (S8) (L	.RR S, T, U)	1 cm Muck (A9)	(LRR O)
Histic E	Epipedon (A2)				e (S9) (LRR S,	· •	2 cm Muck (A10) (LRR S)
Black I	Histic (A3)				neral (F1) (LRR	l O)	Reduced Vertic	(F18) (outside MLRA 150A,
Hydrog	gen Sulfide (A4)		Loamy	Gleyed Ma	atrix (F2)		Piedmont Flood	plain Soils (F19) (LRR P, S, ⁻
	ed Layers (A5)		Deplete	ed Matrix (F3)		Anomalous Brig	ht Loamy Soils (F20)
Organi	ic Bodies (A6) (LRR	P, T, U)	Redox	Dark Surfa	ace (F6)		(MLRA 153B)	
5 cm M	lucky Mineral (A7) (I	RR P, T, L	J) Deplete	ed Dark Su	ırface (F7)		Red Parent Mat	erial (TF2)
Muck F	Presence (A8) (LRR	U)	Redox	Depressio	ns (F8)		Very Shallow Da	ark Surface (TF12)
1 cm M	Muck (A9) (LRR P, T)	Marl (F	10) (LRR I	U)		Other (Explain i	n Remarks)
Deplete	ed Below Dark Surfa	ce (A11)	Deplete	ed Ochric (F11) (MLRA 1	51)		
Thick [Dark Surface (A12)		Iron-Ma	anganese I	Masses (F12)	(LRR O, P, T)		hydrophytic vegetation and
Coast	Prairie Redox (A16)	(MLRA 150	DA) Umbrid	: Surface (F	F13) (LRR P, T	', U)	•	ology must be present, bed or problematic.
Sandy	Mucky Mineral (S1)	(LRR O, S) Delta C	Ochric (F17	") (MLRA 151)		uniess distant	ded of problematic.
Sandy	Gleyed Matrix (S4)		Reduce	ed Vertic (F	=18) (MLRA 15	0A, 150B)		
X Sandy	Redox (S5)		Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A)		
Strippe	ed Matrix (S6)		Anoma	llous Bright	t Loamy Soils (l	F20) (MLRA 14 9	9A, 153C, 153D)	
Dark S	Surface (S7) (LRR P,	S, T, U)						
Restrictive	Layer (if observed)	:						
Type:								
Depth (ir	nches):					Hydric	Soil Present? Yes _	X No
Remarks:								
A positive in	ndication of hydric so	il was obse	erved.					

Project/Site:		Bluewater SPM		County:	Nueces	Sampling	Date: la	anuary 31, 2019
Applicant/Owner:			ngineering	Sta				DPA047_PEM
Investigator(s):	E. Munsc		J. Mitchell	Section, Townshi	·	· · · · · · · · · · · · · · · · · · ·	N/A	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Landform (hillslope, te			Saltwater	Local relief (conc	· · · —	ne): Concave		0-5
Subregion (LRR or ML			Т				- · · · · · / 7 Datum:	North American Datum 1983
Soil Map Unit Name:	Mustang	fine sand, 0 to 1 p	ercent slopes, occasi					N/A
Are climatic / hydrolog	c conditions of	on the site typical fo	or this time of year?	(Yes / No)	No	(if no, explain in Rer	marks.)	
Are Vegetation	No ,Soil	No ,or Hydro	logy <u>No</u> signi	ificantly disturbed?	Are "Normal Cir	rcumstances" prese	nt? Yes	X No
Are Vegetation	No ,Soil	No ,or Hydro	logy No natu	rally problematic?	(If ne	eded, explain any a	nswers in Ren	narks.)
SUMMARY OF F	INDINGS	- Attach site	map showing s	sampling poir	nt locations,	transects, imp	portant fea	atures, etc.
				1				
Hydrophytic Vogototi	on Procent?	Voc. V	No					
Hydrophytic Vegetation Hydric Soil Present?	JII F I CSCIIL!	Yes X Yes X			aled Area			
Wetland Hydrology P	resent?	Yes X	No	-		Yes X	No	
Trouding rijarology r				.				
Remarks:								
This point was de	termined to b	e within a wetland	due to the presence of	of all 3 wetland crite	eria			
l line point mae as			uus te tiis preseites t	o. a o				
The survey area	was determin	ed to be wetter than	n normal at the time o	of survey.				
HYDROLOGY								
Wetland hydrolo	gy Indicator	 's:				Secondary Indicator	re (minimum o	f two required)
Primary Indicators	s (minimum o	f one is required; ch	neck all that apply)		-	Surface Soil (-	two required)
X Surface Wa	•		Aquatic Faun	a (B13)			` ,	ve Surface (B8)
	Table (A2)			s (B15) (LRR U)	-	Drainage Pat		(/
Saturation			X Hydrogen Sul	, , ,	-	 Moss Trim Lir		
Water Mar				zospheres on Living	Roots(C3)		Nater Table (C	22)
Sediment [Deposits (B2)			Reduced Iron (C4)		Crayfish Burr	ows (C8)	,
X Drift Depos	its (B3)		Recent Iron R	Reduction in Tilled S	Soils (C6)	Saturation Vis	sible on Aerial	Imagery (C9)
Algal Mat o	r Crust (B4)		Thin Muck Su	urface (C7)		Geomorphic I	Position (D2)	
Iron Depos	its (B5)		Other (Explain	n in Remarks)		Shallow Aquit	tard (D3)	
Inundation	Visible on Ae	rial Imagery (B7)				X FAC-Neutral	Test (D5)	
Water-Stai	ned Leaves (E	39)				Sphagnum m	oss (D8) (LRF	₹ T, U)
Field Observations								
Field Observations:		V Na	Danah (in ah	\. 6				
Surface Water Prese Water Table Present		X No	Depth (inch X Depth (inch	· ——				
Saturation Present?	Yes _	No		nes): >20	Wetland Hydr	rology Present?	Yes X	No
(includes capillary frir		110	Z Bopai (mon		Trottana riyar	ology i rocom.	<u> </u>	
Describe Recorde	ed Data (strea	am gauge, monitorir	ng well, aerial photos	, previous inspectio	ns), if available:			
	•				,			
Remarks:								
A								
A positive indicati	on or wetland	nydrology was obs	served (at least one p	orimary indicator).				

Sampling Point:	DPA047_PEM
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		Absolute	Dominant	Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size:	30 ft.)	% cover	Species?	Status	Number of Dominant Species		
1 Nama Ohaamiaal	,				That Are OBL, FACW, or FAC:	3	(A)
2.	•				_		()
					Total Number of Dominant		
3			·		Species Across All Strata:	3	(B)
4					Species Across Ali Strata.		(B)
5							
6					Percent of Dominant Species		
			= Total Cover		That Are OBL, FACW, or FAC:	100%	(A/B)
	50% of total cover:	0	20% of total cover:	0			
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:		
1. None Observed					Total % Cover of:	Multiply by:	
2					OBL species 100	x 1 = 100	
3.			·		FACW species 20	x 2 = 40	
4.					FAC species 5	x 3 = 15	
5.					FACU species 0	x 4 = 0	
					UPL species 0	x 5 = 0	
6			= Total Cover		· —		— _(D)
				_	Column Totals: 125	(A) <u>155</u>	(B)
	50% of total cover:	0	20% of total cover:	0			
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A =	1.24	
1. Tamarix ramosissima		10	Yes	FACW			
2. Schinus terebinthifolia		5	Yes	<u>FAC</u>	Hydrophytic Vegetation Indicator	s:	
3					1 - Rapid Test for Hydrophy	ytic Vegetation	
4					X 2 - Dominance Test is >50°	%	
5.			·		X 3 - Prevalence Index is ≤ 3	.0 ¹	
6.					Problematic Hydrophytic Ve	egetation ¹ (Explain)	,
·		15	= Total Cover			-9,	
	E00/, of total aguer:		20% of total cover:	3	¹ Indicators of hydric soil and wetlar	ad bydrology must	
Harb Stratum (Dlat size)			20% of total cover.				
Herb Stratum (Plot size:	30 II.)	70		ODI	be present, unless disturbed or prob		
1. Spartina spartinae		70	Yes	OBL_	Definitions of Five Vegetation Str		
2. Borrichia frutescens		15	No	OBL	Tree - Woody plants, excluding wo	-	
3. Andropogon glomeratus		10	No	FACW	approximately 20 ft (6m) or more in	height and 3 in.	
4. Distichlis spicata		15	No	OBL	(7.6 cm) or larger in diameter at brea	ast height (DBH).	
5							
6					Sapling - Woody plants, excluding	woody vines,	
7.					approximately 20 ft (6 m) or more in	height and less	
8.					than 3 in. (7.6 cm) DBH.		
9					Shrub - Woody plants, excluding we	oodv vines.	
10					approximately 3 to 20 ft (1 to 6 m) in	,	
11			T. (-) C				
		110	= Total Cover		Hade All back assure (namentos)	mlamba imalicalima	
	50% of total cover:	55	20% of total cover:	22	Herb - All herbaceous (non-woody)		
Woody Vine Stratum (Plot size:	30 ft.)				herbaceous vines, regardless of size		
1. None Observed					plants, except woody vines, less that	in approximately	
2					3 ft (1 m) in height.		
3.			· · · · · · · · · · · · · · · · · · ·				
4.					Woody vine - All woody vines, rega	ardless of height.	
5.							
			= Total Cover		Hydrophytic		
	50% of total cover:		20% of total cover:	0	* * *		
	50% of total cover.		20% of total cover.		Vegetation		
					Present? Yes X	NO	
Remarks: (if observed, list mo	rphological adaptati	ions below).				
A positive indication of hydropl	nvtic vegetation was	observed	(>50% of dominant	species inde	xed as OBL, FACW, or FAC)		
F	,		,	,	,		

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks	•	on: (Describe Matrix	to the depth	needed to doc		eatures	ommini the abse	ence of indicators.)	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Thistic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) Thin Dark Surface (F1) (LRR D, T) Thin Dark Surface (F1) (MIRR D, T) Thin Dark Surface (F1) (MIRR D, T) Thick Dark Surface (A12) Coast Prairie Redox (A15) (MIRR D, S) Sandy Clay Matrix (S4) Sandy Clay Indicators of Problematic Hydric Soils*: Indicators for Problematic Hydric Soils*: Indicators for Problematic Hydric Soils*: Indicators for Problematic Hydric Soils*: 1 cm Muck (A9) (LRR D, Reduced Vertic (F13) (MIRR D, Thin Dark Surface (F12) (MIRR D, T) Depleted Dark Surface (F12) (MIRR D, T) Wetry Shallow Dark Surface (F12) Other (Explain in Remarks) Depleted Delow Dark Surface (F13) (MIRR D, T, U) Delta Ochric (F17) (MIRR D, 150) Sandy Redox (S5) Selta Ochric (F17) (MIRR A 150A, 150B) Selta Ochric (F18) (MIRR A 150A, 150B) Selta Ochric (F19) (MIRR A 150A, 150B) Selta Ochric (F19) (MIRR A 150A, 150B) Anomalous Bright Loamy Soils (F20) (MIRR A 149A, 153C, 153D) Reduced Vertic (F18) (MIRR D, T, U) Peledmont Floodplain Soils (F19) (MIRR A 149A, 153C, 153D) Reduced Vertic (F18) (MIRR D, T, U) Peledmont Floodplain Soils (F19) (MIRR A 149A, 153C, 153D) Reduced Vertic (F18) (MIRR D, T, U) Peledmont Floodplain Soils (F19) (MIRR A 149A, 153C, 153D)	•			Color (moist)			Loc ²	Texture	Remarks
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Pl=Pore Lining, M=Matrix. Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histic Epipedon (A2) Histic Epipedon (A2) Histic Epipedon (A2) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A4) Histore			100						
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histic Epipedon (A2) Histic Epipedon (A2) Histic Epipedon (A2) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A4) Histore									
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histic Epipedon (A2) Histic Epipedon (A2) Histic Epipedon (A2) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A4) Histore									
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histic Epipedon (A2) Histic Epipedon (A2) Histic Epipedon (A2) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A4) Histore									
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histic Epipedon (A2) Histic Epipedon (A2) Histic Epipedon (A2) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A4) Histore									
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histic Epipedon (A2) Histic Epipedon (A2) Histic Epipedon (A2) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A4) Histore									
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histic Epipedon (A2) Histic Epipedon (A2) Histic Epipedon (A2) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A3) Histore (A3) Histore (A3) Histore (A4) Histore (A3) Histore (A4) Histore									
Histosol (A1)			,				² Location: Pl		_
Histic Epipedon (A2) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR P, T, U) Depleted Dark Surface (F7) 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) Stripped Matrix (S4) Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Delta Ochric (F17) (MLRA 150A) Sardy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Thin Dark Surface (S9) (LRR S, T, U) Loamy Mucky Mineral (F1) (LRR O, P, T, U) Depleted Matrix (F2) Piedmont Floodplain Soils (F10) (MLRA 150A) Reduced Vertic (F18) (MLRA 150B) Reduced Vertic (F18) (MLRA 150B) Sandy Redox (S5) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Hydric Soils Indi	cators: (Appli	icable to all l	RRs, unless o	therwise n	oted.)		Indicators for Proble	ematic Hydric Soils ³ :
Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Mucky Mineral (A7) (LRR P, T, U) Depleted Matrix (F3) Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F6) Muck Presence (A8) (LRR P, T) Depleted Dark Surface (F7) 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) X Sandy Mucky Mineral (S1) (LRR O, S) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Histosol (A1))		Polyva	lue Below	Surface (S8) (L	.RR S, T, U)	1 cm Muck (A9)	(LRR O)
Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Depleted Matrix (F3) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Depleted Dark Surface (F6) Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Dark Surface (F7) Mari (F10) (LRR U) Depleted Below Dark Surface (A11) Thick Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) X Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:	Histic Epiped	don (A2)		Thin D	ark Surfac	e (S9) (LRR S,	T, U)	2 cm Muck (A10)) (LRR S)
Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A1) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A1) Stratifies (A1) Stratifies (A1) Stratifies (A1) Str	Black Histic	(A3)		Loamy	Mucky Mir	neral (F1) (LRF	(O)	Reduced Vertic ((F18) (outside MLRA 150A,E
Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A1) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A1) Stratifies (A1) Stratifies (A1) Stratifies (A1) Str				Loam	Gleyed Ma	atrix (F2)		Piedmont Floodp	olain Soils (F19) (LRR P, S, T
Organic Bodies (A6) (LRR P, T, U) Sem Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Sandy Redox (S5) Delted Orbric (F17) (MLRA 150A) Sandy Redox (S5) Dark Surface (S7) (LRR P, T, U) Delted Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Redox Dark Surface (F6) (MLRA 153B) Red Parent Material (TF2) Red Parent Material (TF2) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Delter (E11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:		, ,			-	, ,			, , ,
5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Dark Surface (F7) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) X Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Redox Depressions (F8) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) SIndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. In a surface (F13) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Needuced Vertic (F18) (MLRA 150A, 150B) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No		,	P T II)		,	•			1. 20amy 00.10 (1. 20)
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) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) 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) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:		, , ,	· · · ·			, ,		-	erial (TF2)
1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A12) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Jepleta Ochric (F13) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. No Mucky Mineral (S1) (LRR O, S) 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) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No		, , ,	· · · · · ·						
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 (S7) (LRR P, S, T, U) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Wetland hydrology must be present, unless disturbed or problematic. January (LRR O, P, T) Wetland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic.		` , `	•		•				, ,
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) Delta Ochric (F18) (MLRA 150A, 150B) Service (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Tenn-Manganese Masses (F12) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Metal 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) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:					, ,	•	F4\	Other (Explain in	remarks)
Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Z Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Delta Ochric (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. Meduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Hydric Soil Present? Yes X No Remarks:			ce (A11)				-	3, ,, ,	banda andrawa ta a sa
Sandy Mucky Mineral (S1) (LRR O, S) 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) Restrictive Layer (if observed): Type: Depth (inches): D					-	, ,			, , ,
Sandy Mucky Mineral (S1) (LRR O, S) X Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Reduced Vertic (F18) (MLRA 150A, 150B) Reduced Vertic (F18) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Hydric Soil Present? Yes X No		` , ,		Umbri	c Surface (F13) (LRR P, T	', U)		
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Sandy Muck	y Mineral (S1) ((LRR O, S)	Delta	Ochric (F17	7) (MLRA 151)		unicos distarb	ed of problematio.
Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:	X Sandy Gleye	ed Matrix (S4)		Reduc	ed Vertic (I	F18) (MLRA 15	0A, 150B)		
Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:	Sandy Redox	x (S5)		Piedm	ont Floodp	lain Soils (F19)	(MLRA 149A)		
Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:	Stripped Mat	trix (S6)		Anoma	alous Brigh	t Loamy Soils (F20) (MLRA 149	A, 153C, 153D)	
Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:	Dark Surface	e (S7) (LRR P.	S, T, U)						
		,							
A positive indication of nyaric soil was observed.	Remarks:			ن					
	A positive indication	on or nyaric soi	i was observe	d.					

Project/Site:		Bluewater SPM		_ County: _		Nueces	Sampling	Date: Ja	anuary 31	2019
Applicant/Owner:		Lloyd Er	naineerina	_ Oounty	State:			Point:		
Investigator(s):	E. Munsch		· · · · · · · · · · · · · · · · · · ·	Section, T	ownship, Ra		<u> </u>	N/A	2171010	
Landform (hillslope, ter			rairie	_	• •	convex, none):	Convex	Slope (%):		0-5
Subregion (LRR or MLI			Т	_ Lat:	•		-97.07808	9 Datum	: North Ame	erican Datum 1983
Soil Map Unit Name:	Mustang	fine sand, 0 to 1 p	ercent slopes, occa				I Classification:		N/A	
Are climatic / hydrologic	conditions or	n the site typical fo	or this time of year?	(Yes / No	o)	No (if no	o, explain in Re	marks.)		
Are Vegetation	No,Soil_	Yes ,or Hydro	ology <u>No</u> sigi	nificantly distu	urbed? Are	e "Normal Circum	nstances" prese	ent? Yes	X N	lo
Are Vegetation	No,Soil	No ,or Hydro	ology <u>No</u> nat	urally problem	natic?	(If neede	d, explain any a	nswers in Rer	narks.)	
SUMMARY OF F	INDINGS	- Attach site	map showing	sampling	point lo	cations, tra	nsects, im	portant fe	atures,	etc.
							-			
Hydrophytic Vogototic	n Procent?	Voc	No. V							
Hydrophytic Vegetation Hydric Soil Present?	ii Fieseiit!	Yes YesX		- le th	e Sampled A	Aroa				
Wetland Hydrology Pi	esent?	Yes			in a Wetland		Yes	No	x	
VVolidina i Tydrology i T	occint.			- """	iii a vvotiaiii					_
Remarks:										
This point was de	ermined not to	o he within a wetl:	and due to the lack o	of hydronhytic	vegetation	and wetland hvd	Irology			
Time pente was as	orranioa riot t	5 50 William a Wolle	and ddo to the lack t	n nyaropnyao	vogotation	and Wolland my a	ology.			
The survey area v	as determine	d to be wetter tha	n normal at the time	of survey.						
				-						
HYDROLOGY										
Wetland hydrolo	av Indicators	 s:					ondary Indicato	ro (minimum o	f two roas	uirod\
_			heck all that apply)			360	Surface Soil	`	i two requ	<u>illeu)</u>
Surface Wa	•	one is required, or	Aquatic Fau	na (B13)			_	getated Conca	ve Surfac	:e (B8)
High Water	` ,			ts (B15) (LRF	R U)		Drainage Pat	-	vo Gariao	0 (20)
Saturation (ulfide Odor (C	-		Moss Trim Li			
Water Mark	•			izospheres oi	•	ots(C3)	_	Water Table (0	C2)	
Sediment D	eposits (B2)			Reduced Iron	_	. ,	Crayfish Burr	•	,	
Drift Depos	ts (B3)		Recent Iron	Reduction in	Tilled Soils	(C6)	_ Saturation Vi	sible on Aerial	Imagery	(C9)
Algal Mat o	Crust (B4)		Thin Muck S	Surface (C7)			Geomorphic	Position (D2)		
Iron Deposi	s (B5)		Other (Expla	ain in Remark	s)		_ Shallow Aqui	tard (D3)		
Inundation '	/isible on Aeri	ial Imagery (B7)					_ FAC-Neutral	Test (D5)		
Water-Stair	ed Leaves (B	9)					_ Sphagnum m	noss (D8) (LRF	₹ T, U)	
Field Observations:										
Surface Water Preser	ot? Voo	No	X Depth (inc	hoo): N/A						
Water Table Present			X Depth (inc	· -						
Saturation Present?	Yes _		· ` `	hes): >20		etland Hydrolog	ny Present?	Yes	No	X
(includes capillary frin		110	Z Bopar (inc	ooj. <u> 20</u>	_ "	onana riyaroroş	gy 1 1000m.			
Describe Recorde	d Data (strear	m gauge, monitori	ng well, aerial photo	s, previous in	spections), i	if available:				
	,									
Remarks:										
No. of the second secon	: 	d beedeed conserve at	b d							
No positive indica	ion of wetland	ı nyarology was ol	bserved.							

		Absolute	Dominant	Indicator	Dominance Test worksheet:
T 0: 1 (D) :	00 (1)				
Tree Stratum (Plot size:	<u>30 ft.</u>)	% cover	Species?	Status	Number of Dominant Species
					That Are OBL, FACW, or FAC: (A)
2					
3					Total Number of Dominant
4.					Species Across All Strata: 2 (B)
					(=/
5					Dancout of Dancincut Conscien
6					Percent of Dominant Species
			= Total Cover		That Are OBL, FACW, or FAC: (A/B)
	50% of total cover:	0	20% of total cover:	0	
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:
1. None Observed					Total % Cover of: Multiply by:
2.					OBL species 0 x 1 = 0
3.					FACW species 0 x 2 = 0
					FAC species 25 x 3 = 75
4					
5					FACU species 0
6					UPL species 30 x 5 = 150
		0	= Total Cover		Column Totals: 55 (A) 225 (B)
	50% of total cover:	0	20% of total cover:	0	
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = 4.09
1. None Observed					
					Hydrophytic Vegetation Indicators:
2.					
3					1 - Rapid Test for Hydrophytic Vegetation
4					2 - Dominance Test is >50%
5					3 - Prevalence Index is ≤ 3.0 ¹
6					Problematic Hydrophytic Vegetation ¹ (Explain)
	<u>.</u>	0	= Total Cover		
	50% of total cover:		20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must
Herb Stratum (Plot size:	30 ft.)		2070 01 total 00001.		be present, unless disturbed or problematic.
	<u> </u>	20	V	LIDI	
1. Opuntia engelmannii			Yes	UPL_	Definitions of Five Vegetation Strata:
2. Ambrosia psilostachya		15	Yes	FAC	Tree - Woody plants, excluding woody vines,
3. Helianthus annuus		10	No	FAC_	approximately 20 ft (6m) or more in height and 3 in.
4. Oxalis stricta		10	No	UPL	(7.6 cm) or larger in diameter at breast height (DBH).
5					
6.					Sapling - Woody plants, excluding woody vines,
7.					approximately 20 ft (6 m) or more in height and less
					than 3 in. (7.6 cm) DBH.
8					
9					Shrub - Woody plants, excluding woody vines,
10					
11					approximately 3 to 20 ft (1 to 6 m) in height.
		55	= Total Cover		
	50% of total cover:	27.5	20% of total cover:	11	Herb - All herbaceous (non-woody) plants, including
Woody Vine Stratum (Plot size:					herbaceous vines, regardless of size, and woody
1. None Observed					plants, except woody vines, less than approximately
					3 ft (1 m) in height.
2.					, ,
3					Mandussine All woods since regardless of beight
4					Woody vine - All woody vines, regardless of height.
5					
		0	= Total Cover		Hydrophytic
	50% of total cover:	0	20% of total cover:	0	Vegetation
			•		Present? Yes No X
Remarks: (if observed, list mo	orphological adaptat	ione helow	١		
itemarks. (ii observed, list mo	orpriological adaptat	ions below,).		
No positive indication of hydro	phytic vegetation wa	as observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).

rofile Description: (Describe to the depth no	eeded to docu	Redox F		ommin the abs	ence of marcators	.,	
lepth Matrix	1 (: 0		- 1	. 2	- .	5 .	
	olor (moist)	%_	Type'	Loc ²	Texture	Remarks	
0-16 10YR 5/2 95	10YR 4/4	5	C	M	Sandy Clay	Disturbed Soils	
Гуре: C=Concentration, D=Depletion, RM=Red	uced Matrix, M	1S=Maske	d Sand Grains.	² Location: F	L=Pore Lining, M=N	Matrix.	
ydric Soils Indicators: (Applicable to all LR	Rs, unless ot	herwise n	oted.)		Indicators for P	roblematic Hydric Soils ³ :	
Histosol (A1)	Polyvalue Below Surface (S8) (LRR S, T						
Histic Epipedon (A2)	Thin Dark Surface (S9) (LRR S, T, U)				2 cm Muck (A10) (LRR S)		
Black Histic (A3)	Loamy	Mucky Mir	neral (F1) (LRF	? O)	Reduced Vertic (F18) (outside MLRA 150A,B		
Hydrogen Sulfide (A4)	Loamy	Gleyed Ma	atrix (F2)		Piedmont F	loodplain Soils (F19) (LRR P, S, T	
Stratified Layers (A5)	Depleted Matrix (F3)				Anomalous Bright Loamy Soils (F20)		
Organic Bodies (A6) (LRR P, T, U)	Redox	Dark Surfa	rce (F6)		(MLRA 153	- , , ,	
5 cm Mucky Mineral (A7) (LRR P, T, U)		ed Dark Su	, ,		*	Material (TF2)	
Muck Presence (A8) (LRR U)		Depressio				w Dark Surface (TF12)	
1 cm Muck (A9) (LRR P, T)		10) (LRR I	` '			ain in Remarks)	
Depleted Below Dark Surface (A11)			5) F11) (MLRA 1	5 1\	Oulei (EXpi	um m Nemarkə)	
<u> </u>		,	, .	•	310010-4-	s of hydrophytic vegetation and	
Thick Dark Surface (A12)		•	Masses (F12)			s of hydrophytic vegetation and hydrology must be present,	
Coast Prairie Redox (A16) (MLRA 150A)		Umbric Surface (F13) (LRR P, T, U)			unless disturbed or problematic.		
Sandy Mucky Mineral (S1) (LRR O, S)) (MLRA 151)		·		
Sandy Gleyed Matrix (S4)		,	18) (MLRA 15				
X Sandy Redox (S5)	Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A)			
Stripped Matrix (S6)	Anoma	lous Bright	Loamy Soils (F20) (MLRA 14	9A, 153C, 153D)		
Dark Surface (S7) (LRR P, S, T, U)							
estrictive Layer (if observed):							
Туре:							
T				Hydri	c Soil Present? Y	es <u>X</u> No	
Туре:				Hydri	c Soil Present? Y	es <u>X</u> No	
Туре:				Hydri	c Soil Present? Y	es <u>X</u> No	
Type:				Hydri	c Soil Present? Y	es X No	
Type:				Hydri	c Soil Present? Y	es X No	
Type:				Hydri	c Soil Present? Y	es <u>X</u> No	
Type:				Hydri	c Soil Present? Y	es X No	
Type:				Hydri	c Soil Present? Y	es X No	
Type:				Hydri	c Soil Present? Y	es X No	
Type:				Hydri	c Soil Present? Y	es X No	
Type:				Hydri	c Soil Present? Y	es X No	
Type:				Hydri	c Soil Present? Y	es X No	
Type:				Hydri	c Soil Present? Y	es X No	
Type:				Hydri	c Soil Present? Y	es X No	
Type:				Hydri	c Soil Present? Y	es X No	
Type:				Hydri	c Soil Present? Y	es X No	
Type:				Hydri	c Soil Present? Y	es X No	
Type:				Hydri	c Soil Present? Y	es <u>X</u> No	
Type:				Hydri	c Soil Present? Y	es <u>X</u> No	
Type:				Hydri	c Soil Present? Y	es <u>X</u> No	
Type:				Hydri	c Soil Present? Y	es <u>X</u> No	
Type:				Hydri	c Soil Present? Y	es <u>X</u> No	
Type:				Hydri	c Soil Present? Y	es <u>X</u> No	
Type:				Hydri	c Soil Present? Y	es <u>X</u> No	
Type:				Hydri	c Soil Present? Y	es <u>X</u> No	
Type:				Hydri	c Soil Present? Y	es <u>X</u> No	
Type:				Hydri	c Soil Present? Y	esX No	

Project/Site:	Blu	ıewater SPM	C	`ounty:	Nueces	Sampling	Date: Is	anuary 31, 2019
Applicant/Owner:	Бій	Lloyd Enginee		County: State				DPA049_PEM
Investigator(s):	E. Munscher			Section, Township		- Campion	N/A	5171010 <u>1</u> 1 EM
Landform (hillslope, terr				Local relief (conca	· · · —	ne): Concave	Slope (%):	0-5
Subregion (LRR or MLR		None		Lat: 27.85			,	North American Datum 1983
Soil Map Unit Name:		sand, 0 to 1 percent				NWI Classification:		N/A
Are climatic / hydrologic	conditions on the	e site typical for this	time of year?	(Yes / No)	No	- _(if no, explain in Re	marks.)	
Are Vegetation	No ,Soil No	o,or Hydrology				ircumstances" prese	nt? Yes	X No
Are Vegetation	No ,Soil No	o, or Hydrology	No naturall	ly problematic?	(If ne	eeded, explain any a	nswers in Ren	narks.)
SUMMARY OF F	NDINGS - A	ttach site man	showing sa	mpling poin	t locations.	transects. im	portant fea	atures, etc.
						,		
Hydrophytic Vegetation		Yes <u>X</u>	No					
Hydric Soil Present?		Yes X	No	Is the Sampl				
Wetland Hydrology Pro	sent?	YesX	No	within a Wet	lland?	Yes X	_ No	
Remarks:								
This point was dete	rmined to be wit	hin a wetland due to	the presence of a	all 3 wetland criter	īla.			
The curvey gree w	as datarminad to	he wetter than norn	and at the time of s	our (o)				
rne survey area w	as determined to	be wetter than norn	nai at the time of s	survey.				
HYDROLOGY								
Wetland hydrolog	y Indicators:					Secondary Indicato	rs (minimum o	f two required)
Primary Indicators	(minimum of one	is required; check a	ıll that apply)			Surface Soil	Cracks (B6)	
Surface Wat	er (A1)		Aquatic Fauna (I			X Sparsely Veg	etated Conca	ve Surface (B8)
High Water	Γable (A2)		Marl Deposits (B	315) (LRR U)		Drainage Pat	terns (B10)	
X Saturation (A	(3)	_X_	Hydrogen Sulfide	e Odor (C1)		Moss Trim Li	nes (B16)	
Water Marks	; (B1)		Oxidized Rhizos	spheres on Living	Roots(C3)	Dry-Season \	Water Table (0	C2)
Sediment De	posits (B2)		Presence of Rec	duced Iron (C4)		Crayfish Burr	ows (C8)	
Drift Deposit	s (B3)		Recent Iron Red	duction in Tilled So	oils (C6)	Saturation Vi	sible on Aerial	Imagery (C9)
Algal Mat or	Crust (B4)		Thin Muck Surfa	ace (C7)		Geomorphic	Position (D2)	
Iron Deposit	s (B5)		Other (Explain ir	n Remarks)		Shallow Aqui	tard (D3)	
Inundation V	isible on Aerial Ir	magery (B7)	, ,			X FAC-Neutral	Test (D5)	
	ed Leaves (B9)	J , ,					oss (D8) (LRF	R T, U)
Field Observations:								
Surface Water Presen		NoX	Depth (inches)	i): <u>N/A</u>				
Water Table Present?	Yes	NoX	Depth (inches)	s): >20				
Saturation Present?		(No	Depth (inches)): <u> </u>	Wetland Hyd	rology Present?	Yes X	_ No
(includes capillary fring								
Describe Recorded	Data (stream ga	auge, monitoring wel	l, aerial photos, pr	revious inspection	ns), if available:			
Remarks:								
Remarks:								
A positive indicatio	n of wetland hvdr	rology was observed	l (at least one prim	narv indicator).				
			. (,,.				
A positive indicatio	n of wetland hydi	rology was observed	I (at least two sec	ondary indicators)).			
·	_			,				

Sampling Point: DPA049_PEM

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 30 ft.)	% cover		Status	Number of Dominant Species	
	70 00101	<u> </u>	<u> </u>	That Are OBL, FACW, or FAC: 3 (A	, l
				That we obe, thew, of the	'
2	-			Tatal Manufact of Density and	
3				Total Number of Dominant	.
4		<u> </u>		Species Across All Strata: 3 (E	3)
5					
6	-			Percent of Dominant Species	
	0	= Total Cover		That Are OBL, FACW, or FAC: (A	VB)
50% of total co	ver:0	20% of total cover:	0		
Sapling Stratum (Plot size:30 ft)				Prevalence Index Worksheet:	
1. None Observed				Total % Cover of: Multiply by:	
2.				OBL species 70 x 1 = 70	
3.		<u> </u>		FACW species 0 x 2 = 0	_
4.	-	<u></u>		FAC species 0 x 3 = 0	_
5.	-	·		FACU species 0 x 4 = 0	_
				UPL species 0 x 5 = 0	-
6	0	= Total Cover			- (B)
F00/ - 51-1-1		•	0	Column Totals: (A) (A)	- (^D)
50% of total co	vei0	20% of total cover:		Dravalana - Indaw - D/A - 4.00	
Shrub Stratum (Plot size: 30 ft.)				Prevalence Index = B/A = 1.00	_
1. None Observed		<u> </u>			
2				Hydrophytic Vegetation Indicators:	
3				1 - Rapid Test for Hydrophytic Vegetation	
4				X 2 - Dominance Test is >50%	
5		<u> </u>		X 3 - Prevalence Index is ≤ 3.0 ¹	
6	-	<u> </u>		Problematic Hydrophytic Vegetation ¹ (Explain)	
	0	= Total Cover			
50% of total co	ver: 0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size: 30 ft.)				be present, unless disturbed or problematic.	
1. Borrichia frutescens	30	Yes	OBL	Definitions of Five Vegetation Strata:	
2. Batis maritima	15	Yes	OBL	Tree - Woody plants, excluding woody vines,	
3. Salicornia depressa	15	Yes	OBL	approximately 20 ft (6m) or more in height and 3 in.	
4. Distichlis spicata	10		OBL	(7.6 cm) or larger in diameter at breast height (DBH).	
5				(1.0 only of larger in diameter at broadt hoight (BBH).	
6				Sapling - Woody plants, excluding woody vines,	
				approximately 20 ft (6 m) or more in height and less	
7				than 3 in. (7.6 cm) DBH.	
8					
9	-	<u> </u>		Shrub - Woody plants, excluding woody vines,	
10	-	· ——		approximately 3 to 20 ft (1 to 6 m) in height.	
11				approximately 3 to 20 ft (1 to 0 fil) in height.	
	70	= Total Cover		Harle All bank and a construction of the const	
50% of total co	ver: <u>35</u>	20% of total cover:	14	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size: 30 ft.				herbaceous vines, regardless of size, and woody	
1. None Observed				plants, except woody vines, less than approximately	
2				3 ft (1 m) in height.	
3					
4				Woody vine - All woody vines, regardless of height.	
5					
	0	= Total Cover		Hydrophytic	
50% of total co	ver: 0	20% of total cover:	0	Vegetation	
	,	•		Present? Yes X No	
Remarks: (if observed, list morphological ada	otations below	·).		<u> </u>	
		,			
A positive indication of hydrophytic vegetation	was observed	(>50% of dominant	species index	xed as OBL, FACW, or FAC).	
A positive indication of hydrophytic vegetation	was observed	(Prevalence Index is	$s \le 3.00$).		

Sampling Point: DPA049_PEM

epth	Matrix			Redox F	eatures			
nches)	Color (moist)	%	Color (moist)	%_	Type ¹	Loc ²	Texture	Remarks
0-6	10YR 5/2	100	None	_	_		Sandy Clay	
6-16	10YR 6/2	80	10YR 6/8	20	С	M	Sandy Clay	
	ncentration, D=Dep					² Location: PL	=Pore Lining, M=Matrix	
lydric Soils	Indicators: (Appl	icable to all	LRRs, unless of	nerwise n	oted.)		Indicators for Proble	ematic Hydric Soils ³ :
Histosol	(A1)		Polyval	ue Below	Surface (S8) (L	RR S, T, U)	1 cm Muck (A9)	(LRR O)
Histic E _l	oipedon (A2)				e (S9) (LRR S, '		2 cm Muck (A10	,
	istic (A3)				neral (F1) (LRR	O)		(F18) (outside MLRA 150A,I
	en Sulfide (A4)		Loamy	Gleyed Ma	atrix (F2)		· 	olain Soils (F19) (LRR P, S, T
	d Layers (A5)			ed Matrix (•			nt Loamy Soils (F20)
	Bodies (A6) (LRR			Dark Surfa	. ,		(MLRA 153B)	
	ıcky Mineral (A7) (L	· · · · · · · ·			ırface (F7)		Red Parent Mate	
	resence (A8) (LRR	-		Depressio				rk Surface (TF12)
	ıck (A9) (LRR P, T)			10) (LRR !	•		Other (Explain in	n Remarks)
	d Below Dark Surfa	ce (A11)			F11) (MLRA 15	•	3.	
	ark Surface (A12)			-	Masses (F12) (· · · · · · · ·		hydrophytic vegetation and
Coast P	rairie Redox (A16) ((MLRA 150 <i>A</i>	· —		=13) (LRR P, T,	U)		logy must be present, ed or problematic.
	Mucky Mineral (S1)	(LRR O, S)		•) (MLRA 151)			
	Gleyed Matrix (S4)			,	=18) (MLRA 15 0	•		
X Sandy F	Redox (S5)				ain Soils (F19)	•		
Stripped	Matrix (S6)		Anoma	lous Bright	t Loamy Soils (F	20) (MLRA 149	A, 153C, 153D)	
estrictive L	rface (S7) (LRR P,							
Restrictive L	ayer (if observed)	:				Hydric	Soil Present? Yes	X No
Restrictive L	ayer (if observed)	:				Hydric	Soil Present? Yes _	X No
Restrictive L	ayer (if observed)	:				Hydric	Soil Present? Yes _	X No
Type: Depth (ind	ayer (if observed)	:				Hydric	Soil Present? Yes _	XNo
Type: Depth (inc	ayer (if observed)	:				Hydric	Soil Present? Yes _	X No
Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes _	X No
Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes _	X No
Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes _	X No
Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes _	X No
Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes _	X No
Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes _	X No
Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes _	XNo
Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes _	X No
Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes _	X No
Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes _	X No
Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes _	X No
Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes _	X No
Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes _	X No
Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes _	X No
Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes _	X No
Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes _	X No
Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes _	X No
Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes _	X No
Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes _	X No
Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes _	X No
Type: Depth (inc	.ayer (if observed) ches):	:				Hydric	Soil Present? Yes _	X No

Project/Site:	Blue	ewater SPM	C	ounts.	Nueces	Sampling	Date: la	anuary 31, 2019
Applicant/Owner:	Diac	Lloyd Enginee		ounty:Stat			Point:	
Investigator(s):	E. Munscher			Section, Township		- Campio	N/A	<u> </u>
Landform (hillslope, terra				ocal relief (conca	· · · —	ne): Concave	Slope (%):	0-5
Subregion (LRR or MLR/		None		Lat: 27.8			- ' ' '	North American Datum 1983
Soil Map Unit Name:		sand, 0 to 1 percen				NWI Classification	•	N/A
Are climatic / hydrologic	conditions on the	site typical for this	time of year? ((Yes / No)	No	_ _(if no, explain in Re	emarks.)	
Are Vegetation	o,Soil N o	or Hydrology				ircumstances" prese	ent? Yes	X No
Are VegetationN	o ,Soil No	or Hydrology	No naturally	y problematic?	(If ne	eeded, explain any a	answers in Ren	narks.)
SUMMARY OF FI	NDINGS - At	tach site mar	showing sa	mplina poin	t locations.	transects. im	portant fea	atures, etc.
				b3 bc				
Hydrophytic Vegetation		Yes X	No					
Hydric Soil Present?		Yes X	No	Is the Samp				
Wetland Hydrology Pre	ent?	YesX	No	within a Wet	lland?	Yes X	_ NO	
Remarks:								
This point was dete	mined to be with	in a wetland due to	the presence of a	ill 3 wetland criter	па.			
The curvey erec we	a datarminad ta [ha wattar than narr	nal at the time of a	unvov				
The survey area wa	s determined to i	be weller than norn	hai at the time of st	urvey.				
HYDROLOGY								
Wetland hydrology	Indicators:					Secondary Indicate	ors (minimum o	f two required)
Primary Indicators (ninimum of one	is required; check a	all that apply)			X Surface Soil	Cracks (B6)	
Surface Wate	r (A1)		Aquatic Fauna (E	B13)		X Sparsely Ve	getated Conca	ve Surface (B8)
High Water T	able (A2)		Marl Deposits (B	15) (LRR U)		Drainage Pa	tterns (B10)	
X Saturation (A	3)		Hydrogen Sulfide	e Odor (C1)		Moss Trim L	ines (B16)	
Water Marks	(B1)		Oxidized Rhizosp	pheres on Living	Roots(C3)	Dry-Season	Water Table (0	C2)
Sediment De	oosits (B2)		Presence of Red	luced Iron (C4)		Crayfish Bur	rows (C8)	
Drift Deposits	(B3)		Recent Iron Red	uction in Tilled So	oils (C6)	Saturation V	isible on Aerial	Imagery (C9)
X Algal Mat or 0	, ,		Thin Muck Surfa		, ,		Position (D2)	3 , (,
Iron Deposits	, ,		Other (Explain in			Shallow Aqu		
	sible on Aerial Im	nagery (B7)	, - ()	,		X FAC-Neutral		
	d Leaves (B9)	97 (7					noss (D8) (LRF	R T. U)
	(- /					' '	(- / (, -,
Field Observations:								
Surface Water Present	Yes	NoX	Depth (inches)): N/A				
Water Table Present?	Yes	No X	Depth (inches)): >20				
Saturation Present?		No	Depth (inches)): <u> </u>	Wetland Hyd	rology Present?	Yes X	_ No
(includes capillary fringe	:)				<u> </u>			
Describe Recorded	Data (stream ga	uge, monitoring we	ll, aerial photos, pr	evious inspection	ns), if available:			
Remarks:								
A positive indication	of wetland hydro	ology was observed	d (at least one prim	nary indicator)				
A positive indication	or wettarid riyure	Jogy was observed	(at least one prim	iary maicator).				
A positive indication	of wetland hydro	ology was observed	d (at least two secr	ondary indicators	١			
A positive indication	or wettand riyurd	Jiogy was observed	i (at least two seco	oridary iridicators,	1-			

		Absolute	Dominant	Indicator	Dominance Test worksheet:		
Tree Stratum (Diet size:	20 ft \	% cover	Dominant	Status			
Tree Stratum (Plot size:		70 COVE	Species?	Status	Number of Dominant Species That Are ORL FACW or FAC:	/Λ	۸.
					That Are OBL, FACW, or FAC: 2	(A	1)
2			<u> </u>		Total Number of Deminerat		
3			<u> </u>		Total Number of Dominant	(E	٥١
4					Species Across All Strata: 2	(B	3)
5			<u> </u>		Develop of Developed Consider		
6	 	0	= Total Cover		Percent of Dominant Species That Are OBL, FACW, or FAC: 100%	/ ^	۸ /D \
	EOO/ of total acyon		-	0	That Are OBL, FACW, OF FAC.		4/B)
Canling Stratum (Dlat size)	50% of total cover:		20% of total cover.	0	Prevalence Index Worksheet:		
Sapling Stratum (Plot size: 1. None Observed	30 ft.)					tiply by:	
	-		<u> </u>			tiply by:	_
2					OBL species x 1 =	105	_
3					FACW species 5 x 2 =	10	_
4					FAC species	0	_
5					FACU species 0 x 4 =	0	_
6					UPL species	0	— _(D)
	500/ 51 1	0	= Total Cover	•	Column Totals:110 (A)	115	_ (B)
		0	20% of total cover:	0	B		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A =	1.05	_
1. None Observed			<u> </u>				
2			<u> </u>		Hydrophytic Vegetation Indicators:		
3.			<u> </u>		1 - Rapid Test for Hydrophytic Vegetati	ion	
4			<u> </u>		X 2 - Dominance Test is >50%		
5			<u> </u>		X 3 - Prevalence Index is ≤ 3.0 ¹		
6					Problematic Hydrophytic Vegetation ¹ (E	Explain)	
			= Total Cover				
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology	/ must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.		
Salicornia depressa		30	Yes	OBL	Definitions of Five Vegetation Strata:		
2. Borrichia frutescens		30	Yes	OBL	Tree - Woody plants, excluding woody vines,		
3. Spartina spartinae		20	No	OBL	approximately 20 ft (6m) or more in height and 3		
4. Distichlis spicata		15	No	OBL	(7.6 cm) or larger in diameter at breast height (E	JBH).	
5. Batis maritima		10	No	OBL			
6. Andropogon glomeratus		5	No	FACW	Sapling - Woody plants, excluding woody vines		
7					approximately 20 ft (6 m) or more in height and	less	
8					than 3 in. (7.6 cm) DBH.		
9							
0					Shrub - Woody plants, excluding woody vines,		
1			. <u>——</u>		approximately 3 to 20 ft (1 to 6 m) in height.		
		110	= Total Cover				
	50% of total cover:	55	20% of total cover:	22	Herb - All herbaceous (non-woody) plants, inclu	ū	
Woody Vine Stratum (Plot size:	30 ft)				herbaceous vines, regardless of size, and wood	-	
1. None Observed			<u> </u>		plants, except woody vines, less than approxima	ately	
2					3 ft (1 m) in height.		
3							
4.					Woody vine - All woody vines, regardless of he	ight.	
5.							
		0	= Total Cover		Hydrophytic		
	50% of total cover:	0	20% of total cover:	0	Vegetation		
			•		Present? Yes X No		
						_	
Remarks: (if observed list me	orphological adaptati	ons below)				
remarks. (ii observed, list m	orpriological adaptati	Olio Delow	<i>)</i> -				
Remarks: (if observed, list me A positive indication of hydrop			,	species inde	exed as OBL, FACW, or FAC).		

A positive indication of hydrophytic vegetation was observed (Prevalence Index is \leq 3.00).

SOIL

Sampling Point: DPA050_PEM

Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks 0-16 10YR 6/2 90 10YR 6/8 10 C M Sandy Clay Polye: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. \$^2\$Location: PL=Pore Lining, M=Matrix. Polyeic Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) Histosol (A2) Thin Dark Surface (S9) (LRR S, T, U) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Loamy Gleyed Matrix (F2) Pedemor (F6) Sorm Mucky Mineral (A7) (LRR P, T, U) Sorm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A6) (LRR U) Redox Dark Surface (F6) Muck Presence (A6) (LRR P, T) Marl (F10) (LRR U) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Gleyed Matrix (S4) Redox Dorries (F13) (LRR P, T, U) Depleted Matrix (S4) Sandy Gleyed Matrix (S4) Redox Dorries (F13) (LRR P, T, U) Sendy Mucky Mineral (S1) (LRR O, S) Selfiped Matrix (S4) Sandy Gleyed Matrix (S4) Redox Dorries (F13) (LRR A 150A) Dark Surface (S7) (LRR P, S, T, U) Polymont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Polymont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Hydric Soil Present? Yes X No Hydric Soil Present? Yes X No Hydric Soil Present? Yes X No		Matrix	. to the uept	needed to doct		eatures	ommin the abst	ence of indicators.)	
Uppe: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Varic Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) Histosol (A2) Thin Dark Surface (S9) (LRR S, T, U) Histosol (A3) Loamy Mucky Mineral (F1) (LRR O) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Stratified Layers (A5) Depleted Matrix (F3) Reduced Vertic (F18) (MLRA 150A) Stratified Layers (A5) Depleted Dark Surface (F6) Granic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Muck Presence (A8) (LRR P, T) Marl (F10) (LRR U) Depleted Delow Dark Surface (A11) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Mucky Mineral (S1) (LRR O, S) Sardy Mucky Mineral (S1) (LRR O, S) Stripped Matrix (S6) Dark Surface (S7) (MLRA 159A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Hydric Soil Present? Yes X No estrictive Layer (if observed): Type: Depth (inches):	Depth inches)		%	Color (moist)			Loc ²	Texture	Remarks
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. **Junction** **Junct			· · · · · · · · · · · · · · · · · · ·						rtomanto
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	0 10			10111 0/0					
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
Histosol (A1)	Type: C=C	oncentration, D=Dep	oletion, RM=	Reduced Matrix, M	IS=Maske	d Sand Grains.	² Location: PL	_=Pore Lining, M=Matri	X.
Histic Epipedon (A2) Black Histic (A3) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Depleted Matrix (F2) Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F6) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Dark Surface (F7) 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) X Sandy Redox (S5) Depleted Order (F17) (MLRA 150A) Dark Surface (S7) (LRR P, T, U) Delta Orderic (F18) (MLRA 150B) X Sandy Redox (S5) Dark Surface (S7) (LRR P, T, U) Derived Matrix (S6) Dark Surface (S7) (LRR P, T, U) Derived Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Thin Dark Surface (S1) (LRR S) Reduced Vertic (F18) (MLRA 150A) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D) 2 cm Muck (A10) (LRR S) Reduced Vertic (F18) (MLRA 150B) Reduced Vertic (F18) (MLRA 149A), 153C, 153D) Betrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Hydric Soils	Indicators: (Appl	icable to all	LRRs, unless ot	nerwise n	oted.)		Indicators for Probl	ematic Hydric Soils ³ :
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X Sandy Redox (S5)	Sandy	Mucky Mineral (S1)	(LRR O, S)	Delta C	chric (F17) (MLRA 151)		uniess disturt	bed of problematic.
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: Depth (inches): Hydric Soil Present? Yes X No emarks:	Sandy	Gleyed Matrix (S4)		Reduce	ed Vertic (I	=18) (MLRA 15	0A, 150B)		
Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No emarks:	X Sandy	Redox (S5)		Piedmo	nt Floodp	ain Soils (F19)	(MLRA 149A)		
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estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No emarks:			S T III		3	, (-, (, , ,	
Type: Depth (inches): Hydric Soil Present? YesX No emarks:		() (- ,	-, -, -,						
							Hydric	Soil Present? Yes _	X No
positive indication of hydric soil was observed.	Remarks:								
positive indication of hydric soil was observed.									
	opositive in	dication of hydric so	il was observ	ved.					

Applicant/Owner: Lloyd Engineering State: Texas Sample Point: DPA051 PEM Investigator(s): E. Munscher and J. Mitchell Section, Township, Range: N/A Landform (hillslope, terrace, etc.): Marsh, Saltwater Local relief (concave, convex, none): Concave Slope (%): 0-5 Subregion (LRR or MLRA): None Lat: 27.854644 Long: 9-7.077275 Datum: North American Datum 1983 Soil Map Unit Name: Mustang fine sand, 0 to 1 percent slopes, occasionally flooded, frequently ponded NWI Classification: N/A Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) No (if no, explain in Remarks.) Are Vegetation No Soil No or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No Are Vegetation No Soil No or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes X No Is the Sampled Area within a Wetland? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No No Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey area was determined to be wetter than normal at the time of survey.	Project/Site:	Rlu	ewater SPM	(County	Nueces	Sampling	Date: la	nnuary 31 2010
Investigatorion File Milescher and J. Michell Section. Township, Range: N/A Lucidrating (Ralispose) Investigatorion N/A No. No	·	Diu							
Landtorn (hillslope, Iterace, etc.): Marsh, Saltwater Local relief (concave, conrex, none): Concave Slope (%): 0-5 subregion (LRR or MLRA): None Lat: 27.854644 Long: 97.077275 Datum: International National Nati	··· —	F Munscher					- Campion		3171001 <u>1</u> 1 EM
Soltreagin (LRR or MLRA): None Latt: 27.854694 Long: 91.071275 Datum: when Accessed Datum: 12.071275 Datum: when Accessed Datum: 12.071275 Datum: when Accessed Datum: 12.071275 Datum: 12.071275 Datum: when Accessed Datum: 12.071275 Datum: 12.07	• • • —					· · · —	ne): Concave	•	0-5
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Are Vegetation No Soil No or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No Are Vegetation Present? Yes X No No attracts problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes X No S Is the Sampled Area within a Wetland? Yes X No S Is the Sampl	Soil Map Unit Name:		sand, 0 to 1 percent						
Are Vegetation No Soil No or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No No Interest No No Interest Normal Circumstances and Soil Normal Circumstan	Are climatic / hydrologic	conditions on the	site typical for this	time of year?	(Yes / No)	No	_ _(if no, explain in Re	marks.)	
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes X No Is the Sampled Area within a Wetland Pydrology Present? Yes X No Wetland Hydrology Present? Yes X No Within a Wetland? Yes X No Wetland Hydrology Present? Yes X No Wetland Hydrology Present? Yes X No Wetland Hydrology Indicators: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey area was determined to be wetler than normal at the time of survey. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required) Secondary Indicators (minimum of two required) X Surface Soil Cracks (Bis) Surface Water (A1) Aquatic Fauna (B13) X Surface Soil Cracks (Bis) Surface Water (A1) Aquatic Fauna (B13) X Surface Soil Cracks (Bis) X Saturation (A3) X Hydrogen Sulface Odor (C1) Moss Trim Lines (B16) Water Marks (B1) Qoxidized Rhizospheres on Living Roots(C3) Dry-Season Water Table (C2) Sediment Deposits (B2) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) Saturation (Na) Surface (C7) Iron Deposits (B5) Question Areal Imagery (B7) Water-Stained Leaves (B9) Teld Observations: Surface Water Present? Yes No X Depth (inches): 320 Vetland Hydrology Present? Yes No X Depth (inches): 320 Saturation Present? Yes No X Depth (inches): 320 Saturation Present? Yes No X Depth (inches): 320 Saturation Present? Yes No X Depth (inches): 320 Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: A positive indication of wetland hydrology was observed (at least one primary indicator).	Are Vegetation	o,Soil <u>No</u>	or Hydrology,	No signific			circumstances" prese	ent? Yes	X No
Hydrophytic Vegetation Present? Yes X No Is the Sampled Area within a Wetland Hydrology Present? Yes X No	Are Vegetation	o,Soil No	or Hydrology,	No natura	lly problematic?	(If ne	eeded, explain any a	answers in Ren	narks.)
Hydrophytic Vegetation Present? Yes X No Is the Sampled Area within a Wetland Hydrology Present? Yes X No	SUMMARY OF FI	NDINGS - A	ttach site mar	showing sa	ampling poin	t locations	. transects. im	portant fea	atures, etc.
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Hydrocogy Present? Yes X No within a Wetland Pydrology Present? Yes X No within a Wetland Pydrology Present? Yes X No within a Wetland Pydrology Present? Yes X No No No No Within a Wetland Pydrology Present? Yes No									
Wetland Hydrology Present? Yes X No within a Wetland? Yes X No Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey area was determined to be wetler than normal at the time of survey. HYDROLOGY Wetland hydrology Indicators: Primary Indicators (minimum of two required) Surface Water (A1) Aquatic Fauna (B13) X Surface Soil Cracks (B6) X Sparsely Vegetated Concave Surface (B8) High Water Table (A2) Mart Deposits (B15) (LRR U) Drainage Patterns (B10) X Saturation (A3) X Hydrogen Sulfide Odor (C1) Moss Trim Lines (B16) Water Marks (B1) Oxidized Rhizospheres on Living Roots(C3) Dry-Season Water Table (C2) Sediment Deposits (B2) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Drift Deposits (B3) Recent for Reduction in Tilled Soils (C8) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Thin Muck Surface (C7) Geomorphic Position (D2) Iron Deposits (B5) Other (Explain in Remarks) Shallow Aquitard (D3) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Depth (inches): NIA Water Table Present? Yes No Depth (inches): NIA Water Table Present? Yes No Depth (inches): 220 Wetland Hydrology Present? Yes X No Depth (inches): 20 Wetland Hydrology Present? Yes X No Depth (inches): 320 Wetland Hydrology Present? Yes X No Depth (inches): 320 Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: A positive indication of wetland hydrology was observed (at least one primary indicator).									
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey area was determined to be wetter than normal at the time of survey. HYDROLOGY Wetland hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water Table (A2) Mand Deposits (B15) (LRR U) Water Marks (B1) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Recent fron Reduction in Tilled Soils (C6) Algal Mat or Crust (B4) Thin Muck Surface (C7) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Fledd Observations: Surface Water Present? Yes No X Depth (inches): NA Water Table Present? Yes No Depth (inches): 0 Wetland Hydrology Present? Yes X No Depth (inches): 0 Wetland Hydrology Present	_				- I				
This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey area was determined to be wetter than normal at the time of survey. ### Wetland hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)	Wetland Hydrology Pre	sent?	res <u>X</u>	No	within a We	tland?	Yes X	_ NO	
This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey area was determined to be wetter than normal at the time of survey. ### Wetland hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)	Remarks:								
HYDROLOGY Wetland hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water Table (A2) Mart Deposits (B15) (LRR U) Water Marks (B1) Sediment Deposits (B2) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Ton Deposits (B5) Algal Mat or Crust (B4) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Surface Water (Present? Yes No X Depth (inches): 220 Saturation Present? Yes No Depth (inches): 0 Wetland Hydrology was observed (at least one primary indicator).									
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Wetland hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water Table (A2) Marl Deposits (B15) (LRR U) X Surface Startano (A3) X Hydrogen Sulfide Odor (C1) Water Marks (B1) Sediment Deposits (B2) Presence of Reduced Iron (C4) Algal Mart Or Crust (B4) Thin Muck Surface (C7) Water Crust (B4) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes No X Depth (inches): 20 Surface Water Present? Yes X No Depth (inches): 0 Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: A positive indication of wetland hydrology was observed (at least one primary indicator).	i ne survey area wa	s determined to	be wetter than norm	nai at the time of	survey.				
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Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1)	HYDROLOGY								
Surface Water (A1)	Wetland hydrolog	/ Indicators:					Secondary Indicato	rs (minimum o	f two required)
High Water Table (A2) Marl Deposits (B15) (LRR U) Drainage Patterns (B10) X Saturation (A3) X Hydrogen Sulfide Odor (C1) Moss Trim Lines (B16) Water Marks (B1) Oxidized Rhizospheres on Living Roots(C3) Dry-Season Water Table (C2) Sediment Deposits (B2) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Thin Muck Surface (C7) Geomorphic Position (D2) Iron Deposits (B5) Other (Explain in Remarks) Shallow Aquitard (D3) Inundation Visible on Aerial Imagery (B7) X FAC-Neutral Test (D5) Water-Stained Leaves (B9) Sphagnum moss (D8) (LRR T, U) Field Observations: Surface Water Present? Yes No X Depth (inches): N/A Water Table Present? Yes No Depth (inches): 220 Saturation Present? Yes X No Depth (inches): 10 Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: A positive indication of wetland hydrology was observed (at least one primary indicator).	Primary Indicators (minimum of one	is required; check a	all that apply)			X Surface Soil	Cracks (B6)	
X Saturation (A3) X Hydrogen Sulfide Odor (C1) Moss Trim Lines (B16) Water Marks (B1) Oxidized Rhizospheres on Living Roots(C3) Dry-Season Water Table (C2) Sediment Deposits (B2) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Thin Muck Surface (C7) Geomorphic Position (D2) Iron Deposits (B5) Other (Explain in Remarks) Shallow Aquitard (D3) Inundation Visible on Aerial Imagery (B7) X FAC-Neutral Test (D5) Water-Stained Leaves (B9) Sphagnum moss (D8) (LRR T, U) Field Observations: Surface Water Present? Yes No X Depth (inches): N/A Water Table Present? Yes No Depth (inches): 220 Saturation Present? Yes X No Depth (inches): 0 Wetland Hydrology Present? Yes X No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: A positive indication of wetland hydrology was observed (at least one primary indicator).	Surface Wate	⊧r (A1)		Aquatic Fauna	(B13)			-	ve Surface (B8)
Water Marks (B1)	High Water T	able (A2)		Marl Deposits (B15) (LRR U)		Drainage Pat	tterns (B10)	
Sediment Deposits (B2)	X Saturation (A	3)	_X_	Hydrogen Sulfic	de Odor (C1)		Moss Trim Li	ines (B16)	
Drift Deposits (B3)	Water Marks	(B1)		Oxidized Rhizo	spheres on Living	Roots(C3)	Dry-Season	Water Table (0	C2)
Algal Mat or Crust (B4)	Sediment De	posits (B2)		Presence of Re	educed Iron (C4)		Crayfish Burr	rows (C8)	
Iron Deposits (B5) Other (Explain in Remarks) Shallow Aquitard (D3) Inundation Visible on Aerial Imagery (B7) X FAC-Neutral Test (D5) Sphagnum moss (D8) (LRR T, U)	Drift Deposits	(B3)		Recent Iron Re	duction in Tilled S	oils (C6)	Saturation Vi	sible on Aerial	Imagery (C9)
Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes No X Depth (inches): N/A Water Table Present? Yes No X Depth (inches): >20 Saturation Present? Yes X No Depth (inches): 0 Wetland Hydrology Present? Yes X No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: A positive indication of wetland hydrology was observed (at least one primary indicator).	Algal Mat or	Crust (B4)		Thin Muck Surf	ace (C7)		Geomorphic	Position (D2)	
Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes No X Depth (inches): N/A Water Table Present? Yes No X Depth (inches): >20 Saturation Present? Yes X No Depth (inches): 0 Wetland Hydrology Present? Yes X No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: A positive indication of wetland hydrology was observed (at least one primary indicator).	Iron Deposits	(B5)		Other (Explain	in Remarks)		Shallow Aqui	itard (D3)	
Field Observations: Surface Water Present? Yes NoX Depth (inches):	Inundation Vi	sible on Aerial In	nagery (B7)	, , ,			X FAC-Neutral	Test (D5)	
Surface Water Present? Yes No X Depth (inches): N/A Water Table Present? Yes No X Depth (inches): >20 Saturation Present? Yes X No Depth (inches): 0 Wetland Hydrology Present? Yes X No Depth (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: A positive indication of wetland hydrology was observed (at least one primary indicator).									₹ T, U)
Surface Water Present? Yes No X Depth (inches): N/A Water Table Present? Yes No X Depth (inches): >20 Saturation Present? Yes X No Depth (inches): 0 Wetland Hydrology Present? Yes X No Depth (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: A positive indication of wetland hydrology was observed (at least one primary indicator).									
Water Table Present? Yes No X Depth (inches): >20 Saturation Present? Yes X No Depth (inches): 0 Wetland Hydrology Present? Yes X No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: A positive indication of wetland hydrology was observed (at least one primary indicator).	Field Observations:								
Saturation Present? Yes X No Depth (inches): 0 Wetland Hydrology Present? Yes X No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: A positive indication of wetland hydrology was observed (at least one primary indicator).	Surface Water Present			Depth (inches	s): N/A				
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: A positive indication of wetland hydrology was observed (at least one primary indicator).	Water Table Present?	Yes	NoX	Depth (inches	s): <u>>20</u>				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: A positive indication of wetland hydrology was observed (at least one primary indicator).			No	Depth (inches	s):0	Wetland Hyd	Irology Present?	Yes X	_ No
Remarks: A positive indication of wetland hydrology was observed (at least one primary indicator).		•				<u> </u>			
A positive indication of wetland hydrology was observed (at least one primary indicator).	Describe Recorded	Data (stream ga	uge, monitoring wel	ll, aerial photos, p	orevious inspection	ns), if available:			
A positive indication of wetland hydrology was observed (at least one primary indicator).									
A positive indication of wetland hydrology was observed (at least one primary indicator).	Pomarke:								
	Kemarks.								
	A positive indication	of wetland hydr	ology was observed	l (at least one pri	mary indicator).				
A positive indication of wetland hydrology was observed (at least two secondary indicators).	'	,	37	` '	,				
A positive indication of wetland hydrology was observed (at least two secondary indicators).									
	A positive indication	of wetland hydr	ology was observed	d (at least two sed	condary indicators).			

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft)	% cover	Species?	Status	Number of Dominant Species	
1 Nama Observad		70 0010.	<u> </u>	- Clarao	That Are OBL, FACW, or FAC: 2	(A)
					That the obe, thow, of the	(,,)
2					Total Number of Dominant	
3					Species Across All Strata: 2	(B)
4					Species Across Ali Strata.	(D)
5					Dercent of Deminent Charles	
6			= Total Cover		Percent of Dominant Species That Are OBL, FACW, or FAC: 100%	(A/B)
	EOO/ of total acyon		20% of total cover:	0	That Are OBL, FACW, OF FAC.	(A/D)
Sapling Stratum (Plot size:	50% of total cover:		20% of total cover.	0	Prevalence Index Worksheet:	
1. None Observed	30 ft.)				Total % Cover of: Multiply by:	
			-		Total % Cover of: Multiply by: OBL species 40 x 1 = 40	
2					FACW species 0 x 2 = 0	
3					FAC species 0 x3 = 0	
4					FACU species 0 x 4 = 0	
5					UPL species 0 x 5 = 0	
6	-		= Total Cover		Column Totals: 40 (A) 40	—— (B)
	EOO/ of total acyon			0	Column rotals. 40 (A) 40	— ^(b)
Chrub Stratum (Diet eizer	50% of total cover:		20% of total cover:		Prevalence Index = B/A = 1.00	
Shrub Stratum (Plot size:	30 II.)				Prevalence Index = B/A = 1.00	
2					Hydrophytic Vegetation Indicators:	
3					1 - Rapid Test for Hydrophytic Vegetation	
4					X 2 - Dominance Test is >50%	
5					X 3 - Prevalence Index is ≤ 3.0 ¹	
6					Problematic Hydrophytic Vegetation ¹ (Explain))
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
Salicornia depressa		30	Yes	OBL	Definitions of Five Vegetation Strata:	
2. Borrichia frutescens		10	Yes	OBL	Tree - Woody plants, excluding woody vines,	
3					approximately 20 ft (6m) or more in height and 3 in.	
4					(7.6 cm) or larger in diameter at breast height (DBH).	
5						
6					Sapling - Woody plants, excluding woody vines,	
7					approximately 20 ft (6 m) or more in height and less	
8					than 3 in. (7.6 cm) DBH.	
9						
10					Shrub - Woody plants, excluding woody vines,	
11					approximately 3 to 20 ft (1 to 6 m) in height.	
		40	= Total Cover			
	50% of total cover:	20	20% of total cover:	8	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:	30 ft)				herbaceous vines, regardless of size, <u>and</u> woody	
1. None Observed					plants, except woody vines, less than approximately	
2					3 ft (1 m) in height.	
3						
4					Woody vine - All woody vines, regardless of height.	
5						
		0	= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes X No	
Remarks: (if observed, list m	ornhological adaptati	ons helow	<u> </u>			
•						
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	species index	ked as OBL, FACW, or FAC).	
A manifest to all one of the state of			(Decorate and the state of the	< 0.00\		
A positive indication of hydrop	onylic vegetation was	opserved	(rrevalence Index is	s ≥ 3.UU).		

epth nches)	Matrix Color (moist)	<u></u> %	Color (moist)	Redox F	Type ¹	Loc ²	Texture	Remarks
0-16	10YR 5/2	98	10YR 5/8	2	С	M	Sandy Clay	Remarks
			10111 0/0					
	centration, D=Dep					² Location: P	L=Pore Lining, M=Mat	
•	ndicators: (Appli	cable to all L	•		•			lematic Hydric Soils ³ :
Histosol (,				Surface (S8) (L	· · · · · · ·	1 cm Muck (A9	• • • • •
	pedon (A2)				e (S9) (LRR S,	· ·	2 cm Muck (A1	* *
Black Hist				-	neral (F1) (LRF	(0)		c (F18) (outside MLRA 150A,
	Sulfide (A4)			Gleyed Ma				dplain Soils (F19) (LRR P, S, '
	Layers (A5)	. T III		ed Matrix (I	,			ght Loamy Soils (F20)
	Bodies (A6) (LRR F ky Mineral (A7) (L			Dark Surfa	, ,		(MLRA 153B) Red Parent Ma	iterial (TE2)
	sence (A8) (LRR I	· · · · · · · · · · · · · · · · · · ·		ed Dark Su Depression	. ,		Red Parent Ma	neriai (1F2) Park Surface (TF12)
	k (A9) (LRR P, T)	-		10) (LRR I	,		Other (Explain	, ,
	Below Dark Surface			, ,	5) F11) (MLRA 1	51)	Callot (Explain	tomanoj
	k Surface (A12)	,		,	Masses (F12)	•	³ Indicators o	f hydrophytic vegetation and
	airie Redox (A16) (MLRA 150A)		•	13) (LRR P, T		•	rology must be present,
	ıcky Mineral (S1) () (MLRA 151)	,	unless distu	bed or problematic.
				•		04 4500)		
Sandy Gle	eyed Matrix (S4)		Reduce	ed Vertic (F	18) (MLRA 15	UA, 15UB)		
Sandy Gle X Sandy Re	eyed Matrix (S4) edox (S5)					(MLRA 149A)		
X Sandy Re			Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A)	9A, 153C, 153D)	
X Sandy Re Stripped M	edox (S5)	S, T, U)	Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A)	9A, 153C, 153D)	
X Sandy Re Stripped M	edox (S5) Matrix (S6)	S, T, U)	Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A)	9A, 153C, 153D)	
X Sandy Re Stripped N Dark Surf	edox (S5) Matrix (S6)		Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A)	9A, 153C, 153D)	
X Sandy Re Stripped N Dark Surf	edox (S5) Matrix (S6) face (S7) (LRR P,		Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A)	∂A, 153C, 153D)	
Sandy Re Stripped N Dark Surf	edox (S5) Matrix (S6) Face (S7) (LRR P, Fyrer (if observed):	:	Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A) F20) (MLRA 149	9A, 153C, 153D) :: Soil Present? Yes	X No
Sandy Re Stripped M Dark Surf	edox (S5) Matrix (S6) Face (S7) (LRR P, Fyrer (if observed):	:	Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A) F20) (MLRA 149		XNo
Sandy Re Stripped M Dark Surf	edox (S5) Matrix (S6) Face (S7) (LRR P, Fyrer (if observed):	:	Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A) F20) (MLRA 149		XNo
X Sandy Re Stripped M Dark Surf. Restrictive La Type: Depth (inch	edox (S5) Matrix (S6) Face (S7) (LRR P, Fyrer (if observed):	:	Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A) F20) (MLRA 149		XNo
X Sandy Re Stripped M Dark Surf. Restrictive La Type: Depth (inch	edox (S5) Matrix (S6) Face (S7) (LRR P, Fyrer (if observed):		Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A) F20) (MLRA 149		XNo
X Sandy Re Stripped M Dark Surf. Restrictive La Type: Depth (inch	edox (S5) Matrix (S6) Face (S7) (LRR P, Face) Face (S7		Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A) F20) (MLRA 149		X No
X Sandy Re Stripped M Dark Surf. Restrictive La Type: Depth (inch	edox (S5) Matrix (S6) Face (S7) (LRR P, Face) Face (S7		Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A) F20) (MLRA 149		X No
X Sandy Re Stripped M Dark Surf. Restrictive La Type: Depth (inch	edox (S5) Matrix (S6) Face (S7) (LRR P, Face) Face (S7		Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A) F20) (MLRA 149		XNo
X Sandy Re Stripped M Dark Surf. Restrictive La Type: Depth (inch	edox (S5) Matrix (S6) Face (S7) (LRR P, Face) Face (S7		Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A) F20) (MLRA 149		XNo
X Sandy Re Stripped M Dark Surf. Restrictive La Type: Depth (inch	edox (S5) Matrix (S6) Face (S7) (LRR P, Face) Face (S7		Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A) F20) (MLRA 149		X No
X Sandy Re Stripped M Dark Surf. Restrictive La Type: Depth (inch	edox (S5) Matrix (S6) Face (S7) (LRR P, Face) Face (S7		Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A) F20) (MLRA 149		X No
X Sandy Re Stripped M Dark Surf. Restrictive La Type: Depth (inch	edox (S5) Matrix (S6) Face (S7) (LRR P, Face) Face (S7		Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A) F20) (MLRA 149		XNo
X Sandy Re Stripped M Dark Surf. Restrictive La Type: Depth (inch	edox (S5) Matrix (S6) Face (S7) (LRR P, Face) Face (S7		Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A) F20) (MLRA 149		X No
X Sandy Re Stripped M Dark Surf. Restrictive La Type: Depth (inch	edox (S5) Matrix (S6) Face (S7) (LRR P, Face) Face (S7		Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A) F20) (MLRA 149		X No
X Sandy Re Stripped M Dark Surf. Restrictive La Type: Depth (inch	edox (S5) Matrix (S6) Face (S7) (LRR P, Face) Face (S7		Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A) F20) (MLRA 149		X No
X Sandy Re Stripped M Dark Surf. Restrictive La Type: Depth (inch	edox (S5) Matrix (S6) Face (S7) (LRR P, Face) Face (S7		Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A) F20) (MLRA 149		X No
X Sandy Re Stripped M Dark Surf. Restrictive La Type: Depth (inch	edox (S5) Matrix (S6) Face (S7) (LRR P, Face) Face (S7		Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A) F20) (MLRA 149		X No
X Sandy Re Stripped M Dark Surf. Restrictive La Type: Depth (inch	edox (S5) Matrix (S6) Face (S7) (LRR P, Face) Face (S7		Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A) F20) (MLRA 149		X No
X Sandy Re Stripped M Dark Surf. Restrictive La Type: Depth (inch	edox (S5) Matrix (S6) Face (S7) (LRR P, Face) Face (S7		Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A) F20) (MLRA 149		X No
X Sandy Re Stripped M Dark Surf. Restrictive La Type: Depth (inch	edox (S5) Matrix (S6) Face (S7) (LRR P, Face) Face (S7		Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A) F20) (MLRA 149		X No
X Sandy Re Stripped M Dark Surf. Restrictive La Type: Depth (inch	edox (S5) Matrix (S6) Face (S7) (LRR P, Face) Face (S7		Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A) F20) (MLRA 149		X No
X Sandy Re Stripped M Dark Surf. Restrictive La Type: Depth (inch	edox (S5) Matrix (S6) Face (S7) (LRR P, Face) Face (S7		Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A) F20) (MLRA 149		X No

Project/Site:	Bluewater SPM	Cour	nty: Nu	ueces	Sampling Date:	February 5, 2019
Applicant/Owner:	Lloyd Engineer	ing	State:	Texas	Sample Point:	DPB001_PEM
Investigator(s):	. Bailey and N	N. Trivino Sect	ion, Township, Rang	ge:	N/A	
Landform (hillslope, terrace, e	etc.): Marsh, Saltwat	ter Loca	al relief (concave, co	nvex, none):	Concave Slope	(%):0-5
Subregion (LRR or MLRA):	None	I	Lat: 27.850895	Long:	-97.067824 Da	tum: North American Datum 1983
Soil Map Unit Name: Mu	ustang fine sand, 0 to 1 percent	slopes, occasionally	flooded, frequently p	onded NWI Cl	lassification:	N/A
Are climatic / hydrologic condi	itions on the site typical for this ti	ime of year? (Ye	s / No)YE	S (if no, e	explain in Remarks.)	
Are Vegetation No	,Soil No , or Hydrology	No significantly	y disturbed? Are "N	Normal Circumsta	ances" present? Yes	X No
Are Vegetation No	_,Soil No ,or Hydrology _	No naturally pr	roblematic?	(If needed, e	explain any answers in	Remarks.)
SUMMARY OF FINDI	NGS - Attach site map	showing samp	oling point loca	ations, trans	sects, important	features, etc.
Hydrophytic Vegetation Pres	sent? Yes X	No				
Hydric Soil Present?		No	Is the Sampled Are	ea		
Wetland Hydrology Present?		No	within a Wetland?		es X No)
Wolland Hydrology Frodent.			Within a Wottana.		<u> </u>	·
Remarks:		<u>"</u>				
This point was determine	ed to be within a wetland due to t	the presence of all 3	wetland criteria.			
HYDROLOGY	la atama.					
Wetland hydrology Ind					lary Indicators (minimu	
	num of one is required; check all				Surface Soil Cracks (B	·
X Surface Water (A1	· —	Aquatic Fauna (B13	•		Sparsely Vegetated Co	, ,
High Water Table	· · —	Marl Deposits (B15)			Orainage Patterns (B10	•
Saturation (A3)		Hydrogen Sulfide O	, ,		Moss Trim Lines (B16)	
Water Marks (B1)		•	eres on Living Roots(· · —	Ory-Season Water Tab	ole (C2)
Sediment Deposits	· · · —	Presence of Reduce			Crayfish Burrows (C8)	- ni - l lm m - m - (CO)
Drift Deposits (B3)			ion in Tilled Soils (C6	· —	Saturation Visible on A	, ,
Algal Mat or Crust	· ·	Thin Muck Surface			Geomorphic Position (I	02)
Iron Deposits (B5)	on Aerial Imagery (B7)	Other (Explain in Re	emarks)		Shallow Aquitard (D3)	
Water-Stained Lea					FAC-Neutral Test (D5) Sphagnum moss (D8)	
Water-Stained Lea	1V63 (D0)				ppriagrium moss (Do)	(LIKIC 1, O)
Field Observations:						
Surface Water Present?	Yes X No	Depth (inches):	1			
Water Table Present?	Yes No X	Depth (inches):	>20			
Saturation Present?	Yes NoX	Depth (inches): _	>20 Wetla	and Hydrology F	Present? Yes	X No
(includes capillary fringe)						
Describe Recorded Data	(stream gauge, monitoring well,	, aerial photos, previ	ous inspections), if a	vailable:		
Remarks:						
A positive indication of w	vetland hydrology was observed	(at least one primary	indicator).			

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft)	% cover	Species?	Status	Number of Dominant Species	
4. Mana Ohaanaa		70 00 001	Орескоз:	Otatus	That Are OBL, FACW, or FAC:	(Δ)
					That Ale OBE, I AGW, OF I AG.	(^)
2.					Total Name to a Company	
3					Total Number of Dominant	(D)
4					Species Across All Strata: 1	(B)
5						
6					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC: 100%	(A/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1. None Observed					Total % Cover of: Multiply by	<u> </u>
2					OBL species 90 x 1 = 90	
3					FACW species 5	
4.					FAC species 3 x 3 = 9	
5.					FACU species 0 x 4 = 0	
6.					UPL species 0 x 5 = 0	
			= Total Cover		Column Totals: 98 (A) 109	(B)
	50% of total cover:		20% of total cover:	0		\-'
Shrub Stratum (Plot size:			2070 01 10101 00701.		Prevalence Index = B/A = 1.11	
1. None Observed					1 Tevalence index = B/A = 1.11	
_					Lindranhytia Varatatian Indicatora	
					Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
4	-				X 2 - Dominance Test is >50%	
5					X 3 - Prevalence Index is ≤ 3.0 ¹	
6					Problematic Hydrophytic Vegetation ¹ (Explain)
			= Total Cover			
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
Distichlis spicata		90	Yes	OBL	Definitions of Five Vegetation Strata:	
2. Ambrosia psilostachya		3	No	FAC	Tree - Woody plants, excluding woody vines,	
3. Eleocharis montevidensis		5	No	FACW	approximately 20 ft (6m) or more in height and 3 in.	
4.	.				(7.6 cm) or larger in diameter at breast height (DBH).	
5.						
6.					Sapling - Woody plants, excluding woody vines,	
7.					approximately 20 ft (6 m) or more in height and less	
8.					than 3 in. (7.6 cm) DBH.	
9.						
					Shrub - Woody plants, excluding woody vines,	
10	-				approximately 3 to 20 ft (1 to 6 m) in height.	
11	-					
	500/ · £ £ . £		= Total Cover	40.0	Herb - All herbaceous (non-woody) plants, including	
	50% of total cover:	49	20% of total cover:	19.0	herbaceous vines, regardless of size, and woody	
Woody Vine Stratum (Plot size:	30 ft)				plants, except woody vines, less than approximately	
1. None Observed					3 ft (1 m) in height.	
2	<u> </u>				3 it (1 iii) iii neigiit.	
3					NATIONAL AND	
4					Woody vine - All woody vines, regardless of height.	
5						
		0	= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes <u>X</u> No	
Remarks: (if observed, list m	orphological adaptati	ons below)).			
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	species index	ked as OBL, FACW, or FAC).	
,	, 5		,		· · · · · · · · · · · · · · · · · · ·	
A positive indication of hydrop	hytic vegetation was	observed	(Prevalence Index is	s ≤ 3.00).		
			•	,		

Depth	Matrix		-	Redox F	eatures			
inches)_	Color (moist)	%	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks
0-16	10YR 5/1	98	10YR 4/6	2	С	М	Sandy Clay	
		<u></u>						
								
Type: C=Co	oncentration, D=Dep	letion. RM=	=Reduced Matrix. N	 ∕/S=Maske	d Sand Grains.	² Location: P	 L=Pore Lining, M=Mat	rix.
	s Indicators: (Appli					Location: 1		olematic Hydric Soils ³ :
Histoso	,		•		Surface (S8) (L	.RR S. T. U)	1 cm Muck (A9	
	pipedon (A2)				e (S9) (LRR S ,	· · · · · · ·	2 cm Muck (A1	• • •
	listic (A3)				neral (F1) (LRF			c (F18) (outside MLRA 150A ,
	en Sulfide (A4)			Gleyed Ma				dplain Soils (F19) (LRR P, S, 1
	ed Layers (A5)			ed Matrix (ght Loamy Soils (F20)
	c Bodies (A6) (LRR I	D T II\		Dark Surfa			(MLRA 153B)	grit Loarry Solis (1 20)
·	ucky Mineral (A7) (L						,	storial (TE2)
	ucky Mineral (A7) (L resence (A8) (LRR I		· — ·	ed Dark Su			Red Parent Ma	
	` , `	•		Depressio				Oark Surface (TF12)
	uck (A9) (LRR P, T)			10) (LRR	-	E4)	Other (Explain	ш кетагкѕ)
	ed Below Dark Surface	ce (A11)			F11) (MLRA 1	•	3Indicators o	f budraphytic vagatation and
	Oark Surface (A12)	MI DA 450		•	Masses (F12)			f hydrophytic vegetation and rology must be present,
	Prairie Redox (A16) (F13) (LRR P, T	, u)		bed or problematic.
	Mucky Mineral (S1) (LKK U, S)		,	() (MLRA 151)	04 4500		
	Gleyed Matrix (S4)				F18) (MLRA 15			
X Sandy F	, ,			-	ain Soils (F19)			
	d Matrix (S6)		Anoma	alous Brigh	t Loamy Soils (F20) (MLRA 14 9	A, 153C, 153D)	
	urface (S7) (LRR P, Layer (if observed)	: · · ·						
Restrictive I Type: Depth (ind	Layer (if observed)	: · · ·				Hydrid	Soil Present? Yes	X No
Type: Depth (inc	Layer (if observed)	: · · ·				Hydrio	Soil Present? Yes	X No
Type: Depth (ind	Layer (if observed):	:				Hydrid	: Soil Present? Yes	XNo
Type: Depth (inc	Layer (if observed)	:				Hydrid	Soil Present? Yes	XNo
Type: Depth (ind	Layer (if observed):	:				Hydrid	Soil Present? Yes	XNo
Type: Depth (ind	Layer (if observed):	:				Hydrid	Soil Present? Yes	XNo
Type: Depth (ind	Layer (if observed):	:				Hydrid	Soil Present? Yes	XNo
Type: Depth (ind	Layer (if observed):	:				Hydrio	Soil Present? Yes	XNo
Type: Depth (ind	Layer (if observed):	:				Hydrid	Soil Present? Yes	X No
Type: Depth (ind	Layer (if observed):	:				Hydrid	: Soil Present? Yes	X No
Type: Depth (independent of the content of the cont	Layer (if observed):	:				Hydrid	Soil Present? Yes	X No
Type: Depth (independent of the content of the cont	Layer (if observed):	:				Hydrid	: Soil Present? Yes	X No
Type: Depth (ind	Layer (if observed):	:				Hydrid	Soil Present? Yes	X No
Type: Depth (ind	Layer (if observed):	:				Hydric	Soil Present? Yes	XNo
Type: Depth (ind	Layer (if observed):	:				Hydric	Soil Present? Yes	XNo
Type: Depth (ind	Layer (if observed):	:				Hydric	Soil Present? Yes	XNo
Type: Depth (ind	Layer (if observed):	:				Hydric	Soil Present? Yes	XNo
Type: Depth (ind	Layer (if observed):	:				Hydrid	Soil Present? Yes	XNo
Type: Depth (inc	Layer (if observed):	:				Hydrid	Soil Present? Yes	XNo
Type: Depth (inc	Layer (if observed):	:				Hydrid	Soil Present? Yes	XNo
Type: Depth (ind	Layer (if observed):	:				Hydrid	Soil Present? Yes	XNo
Type: Depth (inc	Layer (if observed):	:				Hydrid	Soil Present? Yes	X No
Type: Depth (inc	Layer (if observed):	:				Hydrid	Soil Present? Yes	X No
Type: Depth (inc	Layer (if observed):	:				Hydrid	Soil Present? Yes	X No
Type: Depth (ind	Layer (if observed):	:				Hydrid	Soil Present? Yes	X No
Type: Depth (inc	Layer (if observed):	:				Hydrid	Soil Present? Yes	X No

Project/Site: Applicant/Owner:	Blue	water SPM		County:	Nueces		Sampling D	ate: F	ebruary 5, 2019
		Lloyd Engine		Sta		Texas		int:	DPB002 U
Investigator(s):	C. Bailey	and	N. Trivino	Section, Townsh	ip, Range:			N/A	
Landform (hillslope, terrace				Local relief (cond		none):	Convex	Slope (%):	0-5
Subregion (LRR or MLRA):		None		Lat: 27.8		Long:			: North American Datum 1983
,			nt slopes, occasio					_	N/A
Are climatic / hydrologic cor							_		
, ,		or Hydrology	•	cantly disturbed?			•	,	X No
		or Hydrology,		ally problematic?			explain any ans		
				•	,		•		•
SUMMARY OF FINE	JINGS - All	ach site ma	p snowing s	ampling poli	it iocatioi	is, trans	sects, imp	ortant le	atures, etc.
Hydrophytic Vegetation Pr	resent? Y	esX	No						
Hydric Soil Present?		es X	No	Is the Sam	oled Area				
Wetland Hydrology Presei	nt? Y	es	No X	within a Wo	etland?	Υ	es	No	Χ
Remarks:									
This point was determ	ined not to be v	vithin a wetland o	lue to the lack of v	vetland hydrology					
LIVEROL COV									
HYDROLOGY									
Wetland hydrology li								•	f two required)
Primary Indicators (min	nimum of one is	required; check	all that apply)				Surface Soil Cı	` '	
Surface Water ((A1)		_ Aquatic Fauna	(B13)		:	Sparsely Vege	tated Conca	ve Surface (B8)
High Water Tab	le (A2)		_ Marl Deposits ((B15) (LRR U)		'	Drainage Patte	rns (B10)	
Saturation (A3)			_ Hydrogen Sulfi	de Odor (C1)			Moss Trim Line	es (B16)	
Water Marks (B	1)		_ Oxidized Rhizo	spheres on Livino	g Roots(C3)	!	Dry-Season W	ater Table (0	C2)
Sediment Depos	sits (B2)		_ Presence of Re	educed Iron (C4)		(Crayfish Burro	ws (C8)	
Drift Deposits (E	33)		_ Recent Iron Re	duction in Tilled	Soils (C6)	:	Saturation Visil	ole on Aerial	Imagery (C9)
Algal Mat or Cru	ıst (B4)		_ Thin Muck Sur	face (C7)			Geomorphic Po	osition (D2)	
Iron Deposits (B	35)		Other (Explain	in Remarks)		;	Shallow Aquita	rd (D3)	
#6# Bopoono (B	la an Aarial Ima	agery (B7)				_X_	FAC-Neutral T	est (D5)	
Inundation Visib	ne on Aenai ima					:	Sphagnum mo	ss (D8) (LRF	R T, U)
Inundation Visib									
Inundation Visib									
Inundation Visib Water-Stained L		No X	Depth (inche	s): N/A					
Inundation Visib Water-Stained L Field Observations:	_eaves (B9)	No X No X	_ · `	· ——					
Inundation Visib Water-Stained L Field Observations: Surface Water Present? Water Table Present?	Yes Yes	No X	_	s): >20	Wetland H		Present?	/es	No X
Inundation Visib Water-Stained L Field Observations: Surface Water Present?	Leaves (B9)	_	_ · `	s): >20	Wetland H		Present? \	/es	_ NoX
Inundation Visib Water-Stained L Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	YesYesYes	No X No X	Depth (inche	s): >20 s): >20		lydrology	Present? \	/es	_ NoX
Inundation Visib Water-Stained L Field Observations: Surface Water Present? Water Table Present? Saturation Present?	YesYesYes	No X No X	Depth (inche	s): >20 s): >20		lydrology	Present? \	/es	_ NoX
Inundation Visib Water-Stained L Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	YesYesYes	No X No X	Depth (inche	s): >20 s): >20		lydrology	Present? \	/es	No X
Inundation Visib Water-Stained L Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Da	YesYesYes	No X No X	Depth (inche	s): >20 s): >20		lydrology	Present? \	/es	No X
Inundation Visib Water-Stained L Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	YesYesYes	No X No X	Depth (inche	s): >20 s): >20		lydrology	Present? \	/es	NoX
Inundation Visib Water-Stained L Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Da	YesYesyesata (stream gau	No X No X ge, monitoring w	Depth (inche Depth (inche Berial photos,	s): >20 s): >20		lydrology	Present? \	/es	_ NoX
Inundation Visib Water-Stained L Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Da	YesYesyesata (stream gau	No X No X ge, monitoring w	Depth (inche Depth (inche Berial photos,	s): >20 s): >20		lydrology	Present?	/es	_ No X
Inundation Visib Water-Stained L Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Da	YesYesyesata (stream gau	No X No X ge, monitoring w	Depth (inche Depth (inche Berial photos,	s): >20 s): >20		lydrology	Present?	/es	_ NoX
Inundation Visib Water-Stained L Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Da	YesYesyesata (stream gau	No X No X ge, monitoring w	Depth (inche Depth (inche Berial photos,	s): >20 s): >20		lydrology	Present?	/es	_ NoX
Inundation Visib Water-Stained L Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Da	YesYesyesata (stream gau	No X No X ge, monitoring w	Depth (inche Depth (inche Berial photos,	s): >20 s): >20		lydrology	Present?	/es	_ NoX
Inundation Visib Water-Stained L Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Da	YesYesyesata (stream gau	No X No X ge, monitoring w	Depth (inche Depth (inche Berial photos,	s): >20 s): >20		lydrology	Present?	/es	_ NoX
Inundation Visib Water-Stained L Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Da	YesYesyesata (stream gau	No X No X ge, monitoring w	Depth (inche Depth (inche Berial photos,	s): >20 s): >20		lydrology	Present?	/es	_ NoX
Inundation Visib Water-Stained L Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Da	YesYesyesata (stream gau	No X No X ge, monitoring w	Depth (inche Depth (inche Berial photos,	s): >20 s): >20		lydrology	Present?	/es	_ No X
Inundation Visib Water-Stained L Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Da	YesYesyesata (stream gau	No X No X ge, monitoring w	Depth (inche Depth (inche Berial photos,	s): >20 s): >20		lydrology	Present?	/es	
Inundation Visib Water-Stained L Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Da	YesYesyesata (stream gau	No X No X ge, monitoring w	Depth (inche Depth (inche Berial photos,	s): >20 s): >20		lydrology	Present?	/es	_ NoX
Inundation Visib Water-Stained L Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Da	YesYesyesata (stream gau	No X No X ge, monitoring w	Depth (inche Depth (inche Berial photos,	s): >20 s): >20		lydrology	Present?	/es	NoX
Inundation Visib Water-Stained L Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Da	YesYesyesata (stream gau	No X No X ge, monitoring w	Depth (inche Depth (inche Berial photos,	s): >20 s): >20		lydrology	Present?	/es	NoX
Inundation Visib Water-Stained L Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Da	YesYesyesata (stream gau	No X No X ge, monitoring w	Depth (inche Depth (inche Berial photos,	s): >20 s): >20		lydrology	Present?	/es	NoX
Inundation Visib Water-Stained L Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Da Remarks:	YesYesyesata (stream gau	No X No X ge, monitoring w	Depth (inche Depth (inche Berial photos,	s): >20 s): >20		lydrology	Present?	/es	
Inundation Visib Water-Stained L Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Da Remarks:	YesYesyesata (stream gau	No X No X ge, monitoring w	Depth (inche Depth (inche Berial photos,	s): >20 s): >20		lydrology	Present?	/es	NoX
Inundation Visib Water-Stained L Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Da Remarks:	YesYesyesata (stream gau	No X No X ge, monitoring w	Depth (inche Depth (inche Berial photos,	s): >20 s): >20		lydrology	Present?	/es	_ No X

None Observed			Absolute	Dominant	Indicator	Dominance Test worksheet:	
None Observed	Tree Stratum (Plot size:	30 ft.)				Number of Dominant Species	
2 Total Number of Dominant Species Across All Strata: 2 (B) 5.	1 Name Observed			_ 		·	۸)
Total Number of Dominant Species Cross All Stratas Z (B)		•		<u> </u>			,
Species Across All Stratus 2 (B)				<u> </u>		Total Number of Dominant	
Percent of Dominant Species						Species Across All Strata: 2 (B	3)
Percent of Dominant Species That Are OBLE FACW, pr FAC: 50% (AB)							
That Are OBL_FACW, or FAC: 50% (A/B)				· <u></u>		Percent of Dominant Species	
Sapting Stratum (Plot size: 30 ft.) 1. None Observed			0	= Total Cover		That Are OBL, FACW, or FAC: 50% (A	VB)
Total % Cover of: Multiply by: OBL species 25		50% of total cover:	0	20% of total cover:	0		
None Observed	Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
## Species 15 15 15 15 15 15 15 1	1. None Observed	,				Total % Cover of: Multiply by:	
## Species 15 15 15 15 15 15 15 1	2.					OBL species 25 x 1 = 25	_
## ACQUISPOSES 15						FACW species 5 x 2 = 10	_
FACU species S5						FAC species 15 x 3 = 45	_
Column Totals Column Total						FACU species 55 x 4 = 220	
Column Totals: 100 (A) 300 (B)				<u> </u>			
Shrub Stratum (Plot size: 30 ft.) 1. None Observed 1. None Obser				= Total Cover		Column Totals: 100 (A) 300	— (B)
None Observed		50% of total cover:	0	20% of total cover:	0		_ ` ′
1. None Observed 2.	Shrub Stratum (Plot size:					Prevalence Index = B/A = 3.00	
2.							_
3.	_					Hydrophytic Vegetation Indicators:	
2 - Dominance Test is >50% 5.							
\$ 3 - Prevalence Index is \$\leq 3.0 if control in the problematic Hydrophytic Vegetation (Explain) Trifolium repens							
Problematic Hydrophytic Vegetation (Explain)	5.					X 3 - Prevalence Index is ≤ 3.0 ¹	
Formula Form						Problematic Hydrophytic Vegetation ¹ (Explain)	
Solution Solution				= Total Cover			
Depresent, unless disturbed or problematic.		50% of total cover:			0	¹ Indicators of hydric soil and wetland hydrology must	
1. Trifolium repens	Herb Stratum (Plot size:						
2. Ambrosia psilostachya 3. Andropogon glomeratus 4. Eleocharis palustris 5. No FACW 4. Eleocharis palustris 5. No FACW 6. Sapling - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine - All woody vines, regardless of height. Hydrophytic Vegetation Present? Yes X No	· —		55	Yes	FACU		
3. Andropogon glomeratus 4. Eleocharis palustris 5. Yes OBL 5. 6. 7. 8. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9.						_	
4. Eleocharis palustris 5. G. Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 20 ft (1 to 6 m) in height. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Woody Vine Stratum (Plot size: 30 ft.) 1. None Observed 2. Shrub - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine - All woody vines, regardless of height. Woody vine - All woody vines, regardless of height. Woody vine - All woody vines, regardless of height. Woody vine - All woody vines, regardless of height. Woody vine - All woody vines, regardless of height. Woody vine - All woody vines, regardless of height.				No	FACW		
Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody Vine Stratum (Plot size: 30 ft.) 1. None Observed 2. 3ft (1 m) in height. Woody vine - All woody vines, regardless of height. Woody vine - All woody vines, regardless of height. Woody vine - All woody vines, regardless of height. Woody vine - All woody vines, regardless of height. YesX No							
Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine - All woody vines, regardless of height. Woody vine - All woody vines, regardless of height. Hydrophytic Vegetation Present? Yes X No	· · · · · · · · · · · · · · · · · · ·					(···· -··· , -·· -··· g -· ····· -·· -· -·· -··	
7				-		Sapling - Woody plants, excluding woody vines,	
8. 9. 10. 10. 11. 11. 11. 11. 11. 11. 11. 11						approximately 20 ft (6 m) or more in height and less	
9						than 3 in. (7.6 cm) DBH.	
Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. 100				-			
approximately 3 to 20 ft (1 to 6 m) in height. 100				· 		Shrub - Woody plants, excluding woody vines,	
100				· 		approximately 3 to 20 ft (1 to 6 m) in height.	
Solid Cover: Soli	* **		100	= Total Cover			
Woody Vine Stratum (Plot size:		50% of total cover:			20	Herb - All herbaceous (non-woody) plants, including	
1. None Observed 2.	Woody Vine Stratum (Plot size:			2070 01 10101 00701.		herbaceous vines, regardless of size, and woody	
2	,					plants, except woody vines, less than approximately	
3							
4				·			
5						Woody vine - All woody vines, regardless of height.	
Remarks: (if observed, list morphological adaptations below). Total Cover 20% of total cover: 0 20% of total cover: 0 Present? Hydrophytic Vegetation Present? YesX No				·			
50% of total cover: 0 20% of total cover: 0 Vegetation Present? Yes X No Remarks: (if observed, list morphological adaptations below).	··			= Total Cover		Hydrophytic	
Present? Yes X No Remarks: (if observed, list morphological adaptations below).		50% of total cover:			0		
Remarks: (if observed, list morphological adaptations below).		5070 Of total cover.		2070 01 10101 00701.		_	
						100 <u>X</u> 100	
	Remarks: (if observed list mo	ornhological adaptati	ons helow	1			
A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).	•						
	A positive indication of hydrop	hytic vegetation was	observed	(Prevalence Index is	$s \le 3.00$).		

Color (moist))epth	Matrix			Redox F	eatures			
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.	nches)	Color (moist)	%_	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (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) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) 2 cm Muck (A10) (LRR S) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S) Stratified Layers (A5) Depleted Matrix (F3) Piedmont Floodplain Soils (F19) (LRR P, S) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F6) (MLRA 153B) 1 cm Muck (A9) (LRR P, T, U) Piedmont Floodplain Soils (F19) (LRR P, S) 1 cm Muck (A9) (LRR P, T, U) Piedmont Floodplain Soils (F19) (LRR P, S) 1 cm Muck (A9) (LRR P, T, U) Piedmont Floodplain Soils (F19) (LRR P, S) 2 cm Mucky Mineral (A7) (LRR P, T, U) Piedmont Floodplain Soils (F10) (MLRA 153B) 3 cm Mucky Mineral (A7) (LRR P, T, U) Piedmont Floodplain Soils (F10) (MLRA 151) Tone Maria (S1) (LRR P, T, U) Piedmont Floodplain Soils (F12) (LRR P, T, U) Piedmont Floodplain Soils (F19) (LRR P, T, U) Piedmont Floodplain Soils (F19) (MLRA 149A) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. 3 Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) 3 Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Depth (inches): Hydric Soil Present? Yes X No	0-20	10YR 5/2_	90	10YR 6/4_	_10_	C	PL	Sandy Clay	
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (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) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) 2 cm Muck (A10) (LRR S) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S) Stratified Layers (A5) Depleted Matrix (F3) Piedmont Floodplain Soils (F19) (LRR P, S) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F6) (MLRA 153B) 1 cm Muck (A9) (LRR P, T, U) Piedmont Floodplain Soils (F19) (LRR P, S) 1 cm Muck (A9) (LRR P, T, U) Piedmont Floodplain Soils (F19) (LRR P, S) 1 cm Muck (A9) (LRR P, T, U) Piedmont Floodplain Soils (F19) (LRR P, S) 2 cm Mucky Mineral (A7) (LRR P, T, U) Piedmont Floodplain Soils (F10) (MLRA 153B) 3 cm Mucky Mineral (A7) (LRR P, T, U) Piedmont Floodplain Soils (F10) (MLRA 151) Tone Maria (S1) (LRR P, T, U) Piedmont Floodplain Soils (F12) (LRR P, T, U) Piedmont Floodplain Soils (F19) (LRR P, T, U) Piedmont Floodplain Soils (F19) (MLRA 149A) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. 3 Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) 3 Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Depth (inches): Hydric Soil Present? Yes X No									
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (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) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) 2 cm Muck (A10) (LRR S) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S) Stratified Layers (A5) Depleted Matrix (F3) Piedmont Floodplain Soils (F19) (LRR P, S) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F6) (MLRA 153B) 1 cm Muck (A9) (LRR P, T, U) Piedmont Floodplain Soils (F19) (LRR P, S) 1 cm Muck (A9) (LRR P, T, U) Piedmont Floodplain Soils (F19) (LRR P, S) 1 cm Muck (A9) (LRR P, T, U) Piedmont Floodplain Soils (F19) (LRR P, S) 2 cm Mucky Mineral (A7) (LRR P, T, U) Piedmont Floodplain Soils (F10) (MLRA 153B) 3 cm Mucky Mineral (A7) (LRR P, T, U) Piedmont Floodplain Soils (F10) (MLRA 151) Tone Maria (S1) (LRR P, T, U) Piedmont Floodplain Soils (F12) (LRR P, T, U) Piedmont Floodplain Soils (F19) (LRR P, T, U) Piedmont Floodplain Soils (F19) (MLRA 149A) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. 3 Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) 3 Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Depth (inches): Hydric Soil Present? Yes X No									
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Histic Epipedon (A2) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Depleted Matrix (F3) Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F6) Loamy Gleyed Dark Surface (F7) Muck Presence (A8) (LRR P, T, 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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Matric (S1) Matric (F1) Matric (Location. P		
Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150. Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) Muck Presence (A8) (LRR P, T, U) Depleted Dark Surface (F6) 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) Dark Surface (S7) (LRR P, S, T, U) Mand (F10) (LRR D) Delted Ochric (F11) (MLRA 150A) Setripced Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Mand (F10) (LRR D) Delted Ochric (F11) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Setripced Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Mand (F10) (LRR D) Delted Ochric (F11) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Setripced Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Mand (F10) (LRR D) Delted Ochric (F11) (MLRA 150A) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Mand (F10) (LRR P, S, T, U) Mand (F10) (LRR D, D Mand (F10) (LRR	Histoso	ol (A1)		Polyva	lue Below	Surface (S8) (L	.RR S, T, U)	1 cm Muck (A9)	(LRR O)
Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T) Sandy Mucky Mineral (S1) (LRR 0, S) Sandy Redox (A5) Sandy Redox (S5) Sandy Redox (S5) Depleted Matrix (F2) Depleted Dark Surface (F6) Marl (F10) (LRR U) Depleted Dark Surface (F7) Marl (F10) (LRR U) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR 0, S) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Depleted Selow Dark Surface (S7) Marl (F10) (LRR P, T, U) Depleted Polevic (F13) (LRR P, T, U) Depleted Ochric (F13) (LRR P, T, U) Sandy Mucky Mineral (S1) (LRR 0, S) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Depleted Selow Dark Surface (S7) (LRR P, S, T, U) Piedmont Floodplain Soils (F20) Marl (F10) (MLRA 150A) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Hydric Soil Present? Yes X No No Marl (F10) (LRR P, S) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Hydric Soil Present? Yes X No	— Histic I	Epipedon (A2)		Thin D	ark Surface	e (S9) (LRR S,	T, U)	2 cm Muck (A10) (LRR S)
Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Serm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F6) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) 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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Depleted Bolow Dark Surface (S7) Mark (F10) (LRR U) Depleted Dorric (F11) (MLRA 151) 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) Desta Coast Prairie Redox (A16) Mark (F10) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Destrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Anomalous Bright Loamy Soils (F20) Anomalous Bright Loamy Soils (F20) Anomalous Bright Loamy Soils (F20) Anomalous Bright Present? Yes X No	— Black I	Histic (A3)		 Loamy	Mucky Mir	neral (F1) (LRR	(O)	Reduced Vertic	(F18) (outside MLRA 150A,
Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Serm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F6) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) 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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Depleted Bolow Dark Surface (S7) Mark (F10) (LRR U) Depleted Dorric (F11) (MLRA 151) 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) Desta Coast Prairie Redox (A16) Mark (F10) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Destrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Anomalous Bright Loamy Soils (F20) Anomalous Bright Loamy Soils (F20) Anomalous Bright Loamy Soils (F20) Anomalous Bright Present? Yes X No	— Hydrog	gen Sulfide (A4)						Piedmont Flood	plain Soils (F19) (LRR P, S,
5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) O	Stratifi	ed Layers (A5)						Anomalous Brig	ht Loamy Soils (F20)
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) Depleted Ochric (F11) (MLRA 151) 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 151) Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Sestrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No No	— Organi	c Bodies (A6) (LRR	P, T, U)	—— Redox	Dark Surfa	ice (F6)		(MLRA 153B)	
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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Destrictive Layer (if observed): Type: Depth (inches): Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Jettor Murch A151 Sendy Gleyed Matrix (S4) Stripped Matrix (S4) Anomalous Bright Loamy Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Hydric Soil Present? Yes X No No Marl (F10) (LRR U) Other (Explain in Remarks) Jettor (F11) (MLRA 151) Sendy Gleyed Matrix (S4) Anomalous Bright Loamy Soils (F12) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	5 cm N	lucky Mineral (A7) (L	RR P, T, L	J) Deplet	ed Dark Su	ırface (F7)		Red Parent Mat	erial (TF2)
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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Delta Ochric (F17) (MLRA 151A) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Destrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Jelical Cochric (F17) (MLRA 151) Sandy Redox (A16) (MLRA 150A) Wetland hydrology must be present, unless disturbed or problematic. Wetland hydrology must be present, unless disturbed or problematic. Methods of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Methods of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Methods of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Methods of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Methods of hydrology must be present, unless disturbed or problematic. Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A), 153C, 153D) Methods of hydrology must be present, unless disturbed or problematic.	Muck F	Presence (A8) (LRR	U)	Redox	Depression	ns (F8)		Very Shallow Da	ark Surface (TF12)
Thick Dark Surface (A12)	1 cm N	Muck (A9) (LRR P, T))	Marl (F	10) (LRR I	J)		Other (Explain in	n 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) Restrictive Layer (if observed): Type: Depth (inches): Delta Ochric (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. Method (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Depth (inches): Hydric Soil Present? Yes X No	Deplet	ed Below Dark Surfa	ce (A11)	Deplet	ed Ochric (F11) (MLRA 1	51)		
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) Restrictive Layer (if observed): Type: Depth (inches): Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Reduced Vertic (F18) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Hydric Soil Present? Yes X No	Thick [Dark Surface (A12)		Iron-M	anganese l	Masses (F12)	(LRR O, P, T)	³ Indicators of	hydrophytic vegetation and
Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B)	 Coast	Prairie Redox (A16)	(MLRA 150	A) Umbri	c Surface (F	13) (LRR P, T	, U)	•	•
X 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) Destrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	— Sandy	Mucky Mineral (S1)	(LRR O, S)	Delta (Ochric (F17) (MLRA 151)		unless disturb	ed or problematic.
X 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) Destrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Sandy	Gleved Matrix (S4)			•		0A, 150B)		
Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Destrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? YesX No				—— Piedm	ont Floodpl	ain Soils (F19)	(MLRA 149A)		
Dark Surface (S7) (LRR P, S, T, U) Destrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Demarks:		, ,		Anoma	alous Bright	Loamy Soils (I	F20) (MLRA 14	9A, 153C, 153D)	
Type: Hydric Soil Present? YesX No	Dark S	surface (S7) (LRR P,	S, T, U)				, .		
Depth (inches): Hydric Soil Present? Yes X No elemarks:	Restrictive	Layer (if observed)	:						
Depth (inches): Hydric Soil Present? Yes X No	Type:								
	Depth (ir						Hydri	c Soil Present? Yes _	X No
	.								
positive indication of hydric soil was observed.	kemarks:								
	positive in	ndication of hydric so	il was obse	rved.					

Project/Site:	Bluewater SPM	Cou	inty:	Nueces	Sampling	Date: February 5	5, 2019
Applicant/Owner:	Lloyd Engineeri	ing	State	e:7	Texas Sample F	Point: DPB003_	PEM
Investigator(s): C.	. Bailey and N	N. Trivino Sec	ction, Township	, Range:		N/A	
Landform (hillslope, terrace, et		Loc	cal relief (conca	ve, convex, non	ne): Convex	Slope (%):	0-5
Subregion (LRR or MLRA):	None		Lat: 27.85	0916 Lor	ng:97.06867	Datum: North Am	erican Datum 1983
Soil Map Unit Name: Mu	istang fine sand, 0 to 1 percent	slopes, occasionally	y flooded, frequ	ently ponded	NWI Classification:	N/A	
Are climatic / hydrologic condit	tions on the site typical for this ti	ime of year? (Ye	es / No)	YES	(if no, explain in Rei	marks.)	
Are Vegetation No	,Soil No, or Hydrology	No significant	tly disturbed?	Are "Normal Ci	rcumstances" prese	nt? Yes X	No
Are Vegetation No	,Soil No ,or Hydrology _	No naturally p	oroblematic?	(If ne	eded, explain any a	nswers in Remarks.)	
SUMMARY OF FINDIN	NGS - Attach site map	showing sam	plina point	locations.	transects, im-	oortant features	. etc.
			g p				
Hydrophytic Vegetation Prese	ent? Yes X	No					
Hydric Soil Present?		No	Is the Sampl				
Wetland Hydrology Present?	Yes X	No	within a Wet	and?	Yes X	No	-
Bales							
Remarks: This point was determine	ed to be within a wetland due to t	the presence of all :	3 wetland criter	a			
This point was determine	a to be within a wetland due to	the presence of all t	o welland chief	a.			
HYDROLOGY							
Wetland hydrology Indi				-	•	s (minimum of two req	uired)
	num of one is required; check all				Surface Soil (, ,	
X Surface Water (A1	· —	Aquatic Fauna (B1	•	-		etated Concave Surfac	e (B8)
High Water Table (· ·	Marl Deposits (B15		-	Drainage Pat		
Saturation (A3)		Hydrogen Sulfide (-	Moss Trim Li	, ,	
Water Marks (B1)		Oxidized Rhizosph	_	Roots(C3)		Vater Table (C2)	
Sediment Deposits	· · · —	Presence of Reduc	, ,	-	Crayfish Burr	, ,	
Drift Deposits (B3)		Recent Iron Reduc		ils (C6)		sible on Aerial Imagery	(C9)
Algal Mat or Crust	· · · —	Thin Muck Surface		-	Geomorphic I	, ,	
Iron Deposits (B5)		Other (Explain in R	Remarks)	-	Shallow Aqui	• •	
	on Aerial Imagery (B7)			-	X FAC-Neutral	, ,	
Water-Stained Lea	ives (B9)			-	Sphagnum m	oss (D8) (LRR T, U)	
Field Observations:							
	V V N-	Danth (in abaa)	•				
	Yes X No	Depth (inches):	3				
	Yes No X	Depth (inches):	>20	Watland Lludy	rolowy Drocont?	Vac V Na	
Saturation Present? (includes capillary fringe)	Yes NoX	Depth (inches):	>20	welland Hydr	ology Present?	Yes X No	
	(stream gauge, monitoring well,	aerial photos, prev	vious inspection	s) if available:			
Describe Necorded Data	(Stream gauge, monitoring well,	, aeriai priotos, prev	nous inspection	s), ii avallable.			
Remarks:							
A positive indication of we	etland hydrology was observed	(at least one primar	ry indicator).				

		Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:	30 ft)	% cover	Species?	Status	Number of Dominant Species
4 44 64 4		70 00 001	Ореоюз:	Otatus	
					That Are OBL, FACW, or FAC: (A)
2					Total Number of Deminent
3.					Total Number of Dominant
4					Species Across All Strata:1 (B)
5					
6					Percent of Dominant Species
			= Total Cover		That Are OBL, FACW, or FAC: (A/B)
	50% of total cover:	0	20% of total cover:	0	Prevalence Index Worksheet:
Sapling Stratum (Plot size:	30 ft.)				
					Total % Cover of: Multiply by:
2					OBL species 100 x 1 = 100
3					FACW species 0 x 2 = 0
4					FAC species 0 x 3 = 0
5			<u> </u>		FACU species 0
6			. <u> </u>		UPL species 0 x 5 = 0
		0	= Total Cover		Column Totals: (A) (B)
	50% of total cover:	0	20% of total cover:	0	
Shrub Stratum (Plot size:	30 ft)				Prevalence Index = B/A = 1.00
1. None Observed	·				
2.			<u> </u>		Hydrophytic Vegetation Indicators:
3.					1 - Rapid Test for Hydrophytic Vegetation
4.					X 2 - Dominance Test is >50%
5.					X 3 - Prevalence Index is ≤ 3.0 ¹
					Problematic Hydrophytic Vegetation ¹ (Explain)
6	-		= Total Cover		Troblematic Hydrophytic Vegetation (Explain)
	FOO/ of total acuser			0	1 Indicators of hydric cail and watland hydrology must
Harle Christian (Diet sies)	50% of total cover:		20% of total cover:	0	Indicators of hydric soil and wetland hydrology must
Herb Stratum (Plot size:	·	00	V.	ODI	be present, unless disturbed or problematic.
		90	Yes	OBL_	Definitions of Five Vegetation Strata:
2. Eleocharis palustris		10	No	OBL_	Tree - Woody plants, excluding woody vines,
3					approximately 20 ft (6m) or more in height and 3 in.
4					(7.6 cm) or larger in diameter at breast height (DBH).
5					
6					Sapling - Woody plants, excluding woody vines,
7					approximately 20 ft (6 m) or more in height and less
8			<u> </u>		than 3 in. (7.6 cm) DBH.
9					
10			<u> </u>		Shrub - Woody plants, excluding woody vines,
11					approximately 3 to 20 ft (1 to 6 m) in height.
		100	= Total Cover		
	50% of total cover:	50	20% of total cover:	20	Herb - All herbaceous (non-woody) plants, including
Woody Vine Stratum (Plot size:	30 ft.)				herbaceous vines, regardless of size, and woody
1. None Observed					plants, except woody vines, less than approximately
2.			·		3 ft (1 m) in height.
3.			<u></u>		
4.					Woody vine - All woody vines, regardless of height.
5	<u> </u>				
-			= Total Cover		Hydrophytic
	50% of total cover:		20% of total cover:	0	Vegetation
	0070 Of total cover.		2070 01 total 00001.		-
					Present? Yes <u>X</u> No
Demarks: (if sheered list me	arabalagiaal adaptat	iono holovi	١		
Remarks: (if observed, list mo	orpnological adaptat	ions below).		
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	species index	xed as OBL, FACW, or FAC).
A positive indication of hydrop	hytic vegetation was	observed	(Prevalence Index is	s ≤ 3.00).	
	-			*	

Depth	Matrix			Redox F	-eatures			
inches)	Color (moist)	%	Color (moist)	%_	Type ¹	Loc ²	Texture	Remarks
0-10	10Y 6/1	95	7.5YR 3/3	5	<u> </u>	M	Sandy Clay Loam	Shovel Restriction
		<u> </u>				21		
	oncentration, D=Dep Indicators: (Appl					Location: F	PL=Pore Lining, M=M	oblematic Hydric Soils ³ :
•		icable to a	•		Surface (S8) (LF	DD S T III		A9) (LRR O)
Histoso	pipedon (A2)				e (S9) (LRR S, 1			A3) (LRR S)
	listic (A3)				neral (F1) (LRR			rtic (F18) (outside MLRA 150A ,
	en Sulfide (A4)		X Loamy	-	, , ,	0,		podplain Soils (F19) (LRR P, S,
	ed Layers (A5)			ted Matrix (, ,			Bright Loamy Soils (F20)
	Bodies (A6) (LRR I	P T II)		Dark Surfa	•		(MLRA 153E	- , , ,
	ucky Mineral (A7) (L			ted Dark Su	` '		•	Material (TF2)
	resence (A8) (LRR		· — ·	Depressio	` '			v Dark Surface (TF12)
	uck (A9) (LRR P, T)	-		=10) (LRR	` '			iin in Remarks)
	ed Below Dark Surfa				(F11) (MLRA 15	1)	Other (Explo	iii iii remana)
	ark Surface (A12)	00 (/ (/ 1)			Masses (F12) (I	•	³ Indicators	s of hydrophytic vegetation and
	Prairie Redox (A16) (MI RA 150		•	F13) (LRR P, T,			ydrology must be present,
	Mucky Mineral (S1) (7) (MLRA 151)	Ο,	unless dis	turbed or problematic.
	Gleyed Matrix (S4)	LIKIK O, O		•	7 (MLRA 151) F18) (MLRA 150	Δ 150R)		
	Redox (S5)			,	lain Soils (F19) (· ·		
	d Matrix (S6)					•	9A, 153C, 153D)	
	urface (S7) (LRR P,	S, T, U)	/110111	alous Brigit	t Loamy Jons (1	20) (MEIOA 14	5A, 1000, 100D)	
	Layer (if observed)	:						
Type:	Gravel							v
Depth (in	ches):10					Hydri	c Soil Present? Ye	es <u>X</u> No
Remarks:	dication of hydric soi	l was obse	arved					
t positive iii	dication of flydric 30i	i was obse	vod.					

Project/Site:	Bluev	vater SPM		County:	Nueces		Sampling Date:	February 5, 2019
Applicant/Owner:		Lloyd Engine	ering	St	ate:	Texas	Sample Point:	DPB004_U
Investigator(s):	C. Bailey	and	N. Trivino	Section, Townsh	nip, Range:		N//	A
Landform (hillslope, terrace	, etc.):	Marsh, Saltw	ater	Local relief (con	cave, convex, r	none):C	oncave Slo	pe (%):0-5
Subregion (LRR or MLRA):		None		Lat:27.	850636	Long:	-97.068158	Datum: North American Datum
Soil Map Unit Name:	Mustang fine sa	and, 0 to 1 percer	t slopes, occasio	nally flooded, fre	quently ponded	NWI Clas	ssification:	N/A
Are climatic / hydrologic cor	iditions on the s	site typical for this	•	· / —		` .	olain in Remarks.	,
	_	,or Hydrology		cantly disturbed?			•	
Are Vegetation No	,Soil No _	,or Hydrology	No natura	ally problematic?	(If	needed, exp	olain any answers	s in Remarks.)
SUMMARY OF FINE	DINGS - Att	ach site map	showing s	ampling poi	nt location	ıs, transe	cts, importa	ant features, etc.
Hydrophytic Vegetation Pr	esent? Ye	es <u>X</u>	No					
Hydric Soil Present?		es X	No	Is the Sam	pled Area			
Wetland Hydrology Preser		es	No X	within a W	=	Yes		No X
, 0,								
Remarks:								
This point was determine	ned not to be w	vithin a wetland du	ue to the lack of v	wetland hydrology	,			
This point was determi	ned not to be w	nthin a wettand di	ie to the lack of v	welland hydrology	/.			
HYDROLOGY								
Wetland hydrology Ir	idicators:					Secondar	ry Indicators (min	nimum of two required)
Primary Indicators (mir	nimum of one is	required; check	all that apply)				rface Soil Cracks	, ,
Surface Water (·		Aquatic Fauna	, ,				Concave Surface (B8)
High Water Tab	e (A2)		Marl Deposits				ainage Patterns (•
Saturation (A3)				, ,			ss Trim Lines (B	•
Water Marks (B	•		-	spheres on Livin	g Roots(C3)		/-Season Water	, ,
Sediment Depos			-	educed Iron (C4)	C-:I- (CC)		ayfish Burrows (C	·
Drift Deposits (E	•		-	eduction in Tilled	Solis (Cb)			n Aerial Imagery (C9)
Algal Mat or Cru	, ,		Thin Muck Sur	, ,			omorphic Positio	, ,
Iron Deposits (B	•		Other (Explain	in Remarks)			allow Aquitard (C	•
Inundation Visib		igery (B7)					C-Neutral Test (I	•
Water-Stained L	.eaves (B9)					Sp	hagnum moss (D	78) (LRK I, U)
Field Observations:								
Surface Water Present?	Yes	No X	Depth (inche	es): N/A				
Water Table Present?	Yes	NoX	Depth (inche	· 				
Saturation Present?	Yes	NoX	Depth (inche	<i>'</i>	Wetland H	ydrology Pr	esent? Yes	No X
(includes capillary fringe)		_	- ' `	,		,	_	
Describe Recorded Da	ita (stream gau։	ge, monitoring we	ll, aerial photos,	previous inspecti	ons), if availabl	le:		
	, ,	3			,,			
Remarks:								
No positive indication of	of wetland hydro	ology was observ	ed.					

			Absolute	Dominant	Indicator	Dominance Test worksheet:	
Т	ree Stratum (Plot size:	30 ft.)	% cover	Species?	Status	Number of Dominant Species	
	Nama Ohaamiad	,				'	(A)
						· · ·	_ ` '
						Total Number of Dominant	
						Species Across All Strata: 2	(B)
5.							_ ` ′
						Percent of Dominant Species	
			0	= Total Cover		That Are OBL, FACW, or FAC: 50%	(A/B)
		50% of total cover:	0	20% of total cover:	0		_ ` ´
S	apling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
	None Observed	,				Total % Cover of: Multiply	ov:
		,				OBL species 55 x 1 = 5 5	
						FACW species 0 x 2 = 0	
						FAC species 0 x 3 = 0	
						FACU species 55 x 4 = 22	
						UPL species 0 x 5 = 0	
			0	= Total Cover		Column Totals: 110 (A) 27	
		50% of total cover:		20% of total cover:	0		(-/
S	hrub Stratum (Plot size:			2070 01 10101 00701.		Prevalence Index = B/A = 2.50	
	None Observed						
		-				Hydrophytic Vegetation Indicators:	
						1 - Rapid Test for Hydrophytic Vegetation	
						2 - Dominance Test is >50%	
5						X 3 - Prevalence Index is $\leq 3.0^{1}$	
						Problematic Hydrophytic Vegetation ¹ (Expla	in)
0.				= Total Cover		robiemado riyaropriyato vogotation (Expire	,
		50% of total cover:		20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology mus	·+
н	erb Stratum (Plot size:			20 % Of total cover.		be present, unless disturbed or problematic.) i
	Sporobolus indicus	30 It.)	55	Yes	FACU	Definitions of Five Vegetation Strata:	
	Distichlis spicata		45	Yes	OBL	Tree - Woody plants, excluding woody vines,	
	Eleocharis palustris		10	No	OBL_	approximately 20 ft (6m) or more in height and 3 in.	
						(7.6 cm) or larger in diameter at breast height (DBH)	•
						Sapling - Woody plants, excluding woody vines,	
						approximately 20 ft (6 m) or more in height and less	
						than 3 in. (7.6 cm) DBH.	
						than 6 m. (7.5 cm) BBH.	
						Shrub - Woody plants, excluding woody vines,	
						approximately 3 to 20 ft (1 to 6 m) in height.	
11.				T		approximately 0 to 20 ft (1 to 0 fil) in neight.	
		500/ 51 1		= Total Cover	00	Herb - All herbaceous (non-woody) plants, including	
	/	50% of total cover:	55	20% of total cover:	22	herbaceous vines, regardless of size, and woody	
	Voody Vine Stratum (Plot size:	30 π)				plants, except woody vines, less than approximately	
	None Observed					3 ft (1 m) in height.	
2.		<u> </u>				on (1 m) in noight.	
3.		•				Woody vine - All woody vines, regardless of height.	
4.		•				violativine - 7 in woody vines, regulates of fielght.	
5.				- Tatal Causa		Hudron budio	
		F00/ .ft.t.l		= Total Cover	0	Hydrophytic	
		50% of total cover:	0	20% of total cover:	0	Vegetation Vegetation	
						Present? Yes <u>X</u> No	
	Demonstrate (if also were 1.2.1		lama kata	.			
	Remarks: (if observed, list m	orphological adaptati	ions below).			
	A positive indication of hydrop	ohytic vegetation was	observed	(Prevalence Index is	s ≤ 3.00).		

Profile Description: (Describe to the depth no	eeded to docu	ment the Redox F		onfirm the abs	ence of indicators.)	
	.1(- 1	2	T 4	Demonstra
	olor (moist)		Type'	Loc ²	Texture	Remarks
<u>0-20</u> <u>N 4</u> <u>100</u>	None				Sandy Loam	
¹ Type: C=Concentration, D=Depletion, RM=Red				² Location: P	L=Pore Lining, M=Matri	
Hydric Soils Indicators: (Applicable to all LRI	•		•	DD 0 T II)		lematic Hydric Soils ³ :
Histosol (A1)			Surface (S8) (L	· · · · · · ·	1 cm Muck (A9)	
Histic Epipedon (A2)	Thin Da	rk Surface	(S9) (LRR S ,	T, U)	2 cm Muck (A10	0) (LRR S)
Black Histic (A3)	Loamy N	Mucky Min	eral (F1) (LRR	: O)	Reduced Vertic	(F18) (outside MLRA 150A,E
Hydrogen Sulfide (A4)	Loamy (Gleyed Ma	trix (F2)		Piedmont Flood	plain Soils (F19) (LRR P, S, T
Stratified Layers (A5)	Deplete	d Matrix (F	⁻ 3)		Anomalous Brig	ht Loamy Soils (F20)
Organic Bodies (A6) (LRR P, T, U)) Dark Surfa	,		(MLRA 153B)	. , ,
5 cm Mucky Mineral (A7) (LRR P, T, U)			rface (F7)		Red Parent Mat	erial (TF2)
Muck Presence (A8) (LRR U)		Depression	. ,			ark Surface (TF12)
		•	. ,			, ,
1 cm Muck (A9) (LRR P, T)		0) (LRR (-	=4\	Other (Explain i	n nemarks)
Depleted Below Dark Surface (A11)		•	=11) (MLRA 1	•	3,	Character of the Control of the Cont
Thick Dark Surface (A12)		•	Masses (F12)			hydrophytic vegetation and
Coast Prairie Redox (A16) (MLRA 150A)	Umbric	Surface (F	13) (LRR P, T	, U)		ology must be present, ped or problematic.
Sandy Mucky Mineral (S1) (LRR O, S)	Delta O	chric (F17	(MLRA 151)		unicoo diotan	oca or problematic.
X Sandy Gleyed Matrix (S4)	Reduce	d Vertic (F	18) (MLRA 15	0A, 150B)		
Sandy Redox (S5)	Piedmoi	nt Floodpla	ain Soils (F19)	(MLRA 149A)		
Stripped Matrix (S6)	Anomalo	ous Briaht	Loamy Soils (I	=20) (MLRA 14 9	9A, 153C, 153D)	
Dark Surface (S7) (LRR P, S, T, U)		Ü	, ,	, ,	, , ,	
Restrictive Layer (if observed): Type:						
Depth (inches):				Hydrid	Soil Present? Yes	X No
. ,					_	
Remarks:				•		
positive indication of hydric soil was observed.						
.,,,						

Project/Site:	Bluewater SPM	County:	Nueces	s Sampling	g Date: February 5, 2019
Applicant/Owner:	Lloyd Engineer	ring	State:	Texas Sample	Point: DPB005_PEM
Investigator(s):	C. Bailey and	N. Trivino Section	n, Township, Range:		N/A
Landform (hillslope, terrace	e, etc.): Marsh, Saltwa	ter Local r	elief (concave, convex	, none): Concave	Slope (%):0-5
Subregion (LRR or MLRA):	None	Lat	27.850337	Long: <u>-97.0675</u>	Datum: North American Datum 1983
Soil Map Unit Name:	Mustang fine sand, 0 to 1 percent	slopes, occasionally flo	oded, frequently ponde	ed NWI Classification	n:N/A
Are climatic / hydrologic cor	nditions on the site typical for this t	,	, 	(if no, explain in R	,
	,Soil No ,or Hydrology_			al Circumstances" pres	
Are Vegetation No	,Soil No ,or Hydrology_	No naturally prob	lematic?	(If needed, explain any	answers in Remarks.)
SUMMARY OF FINE	DINGS - Attach site map	showing sampli	ng point locatio	ns, transects, in	nportant features, etc.
Hydrophytic Vegetation Pr	resent? Yes X	No			
Hydric Soil Present?	Yes X		the Sampled Area		
Wetland Hydrology Preser	nt? Yes X	No w	ithin a Wetland?	Yes X	No
Remarks: This point was determ	ined to be within a wetland due to	the presence of all 3 we	etland criteria.		
HYDROLOGY					
Wetland hydrology li	ndicators:			Secondary Indicate	ors (minimum of two required)
Primary Indicators (min	nimum of one is required; check a	ll that apply)			l Cracks (B6)
X Surface Water (· ·	Aquatic Fauna (B13)			egetated Concave Surface (B8)
High Water Tab	· ·	Marl Deposits (B15) (L			atterns (B10)
Saturation (A3)		Hydrogen Sulfide Odo	• •	Moss Trim L	, ,
Water Marks (B	· —	Oxidized Rhizospheres	- , ,		Water Table (C2)
Sediment Depos	• • • • • • • • • • • • • • • • • • • •	Presence of Reduced	• •	Crayfish Bu	, ,
Drift Deposits (E Algal Mat or Cru	· —	Recent Iron Reduction Thin Muck Surface (C)	, ,		/isible on Aerial Imagery (C9)
Iron Deposits (B	· · · —	Other (Explain in Rem	•	Shallow Aqu	c Position (D2)
	ole on Aerial Imagery (B7)	Other (Explain in Nem	aiks)	X FAC-Neutra	, ,
Water-Stained L	- · · ·				moss (D8) (LRR T, U)
	100100 (20)			Spiilagiilaiii i	
Field Observations:					
Surface Water Present?	Yes <u>X</u> No	Depth (inches):	3		
Water Table Present?	Yes NoX	Depth (inches):	>20		
Saturation Present?	Yes NoX	Depth (inches):	>20 Wetland	Hydrology Present?	Yes <u>X</u> No
(includes capillary fringe) Describe Recorded Da	ata (stream gauge, monitoring well	l. aerial photos, previous	s inspections). if availa	ble:	
Boosing Roserdou Bo	na (on oarn gaago, mormoring won	, donar priotos, proviod	o mopositione), ii avalla	510.	
Remarks:					
Remarks.					
A positive indication of	f wetland hydrology was observed	(at least one primary in	dicator).		

Sampling Point:	DPB005_	_PEM

					Dominance Test worksheet:		1
		Absolute	Dominant	Indicator			
<u>Tree Stratum</u> (Plot size:	30 ft.)	% cover	Species?	Status	Number of Dominant Species		
1. None Observed					That Are OBL, FACW, or FAC:	2	(A)
2							
3					Total Number of Dominant		
4.			· · · · · · · · · · · · · · · · · · ·		Species Across All Strata:	2	(B)
5.					'		()
					Percent of Dominant Species		
6			T-1-1-0		· ·	4000/	(A (D)
			= Total Cover	_	That Are OBL, FACW, or FAC:	100%	(A/B)
	50% of total cover:	0	20% of total cover:	0	Prevalence Index Worksheet:		
Sapling Stratum (Plot size:	30 ft.)						
1. None Observed					Total % Cover of:	Multiply by:	<u> </u>
2			<u> </u>		OBL species 50	x 1 = 50	
3					FACW species0	x 2 = 0	
4					FAC species0	x 3 = 0	
5.					FACU species 0	x 4 = 0	
6.					UPL species 0	x 5 = 0	
	-1	0	= Total Cover		Column Totals: 50	(A) 50	(B)
	50% of total sover		20% of total cover:	Ω		,	(5)
Chrish Stratum (DI-4 -:			20 /0 OI LOLAI COVEIT		Dravalanas Indov - D/A	. 400	
Shrub Stratum (Plot size:	30 II.)				Prevalence Index = B/A =	1.00	
1. None Observed			<u> </u>				
2					Hydrophytic Vegetation Indicate		
3					1 - Rapid Test for Hydrop	hytic Vegetation	
4					X 2 - Dominance Test is >5	ე%	
5					_X_3 - Prevalence Index is ≤	3.0 ¹	
6.					Problematic Hydrophytic	Vegetation ¹ (Explain))
		0	= Total Cover				
	50% of total cover:		20% of total cover:	0	¹ Indicators of hydric soil and wetla	and hydrology must	
Herb Stratum (Plot size:			2070 01 10141 00701.		be present, unless disturbed or pro		
1 Distinblis spisots		25	Vaa	OBL			
		35	Yes	OBL_	Definitions of Five Vegetation S		
2. Eleocharis palustris		10		OBL	Tree - Woody plants, excluding w	-	
3. Bacopa monnieri		5	No	<u>OBL</u>	approximately 20 ft (6m) or more in		
4					(7.6 cm) or larger in diameter at br	east height (DBH).	
5							
6					Sapling - Woody plants, excluding	•	
7					approximately 20 ft (6 m) or more i	n height and less	
8.					than 3 in. (7.6 cm) DBH.		
9.			<u></u>				
10.					Shrub - Woody plants, excluding v	woody vines,	
			· —		approximately 3 to 20 ft (1 to 6 m)	in height.	
11		50			, , ,	· ·	
	500/ 51 1 1		= Total Cover	40	Herb - All herbaceous (non-woody	nlante including	
	50% of total cover:	25	20% of total cover:	10	herbaceous vines, regardless of si	, .	
Woody Vine Stratum (Plot size:	30 ft)						
1. None Observed					plants, except woody vines, less th	ian approximately	
2					3 ft (1 m) in height.		
3							
4					Woody vine - All woody vines, reg	jardless of height.	
5.							
		0	= Total Cover		Hydrophytic		
	50% of total cover:	0	20% of total cover:	0	Vegetation		
	0070 01 10101 00101.				_	No	
					Present? Yes X	NO	
Remarks: (if observed, list m	orphological adaptati	ions below	').				
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	species index	xed as OBL, FACW, or FAC).		
, , ,	, 3			•	- , - , - ,		
A positive indication of hydror	hytic vegetation was	observed	(Prevalence Index is	c < 3 00)			
A positive indication of hydrop	myno vegetation was	o opset ved	(1 Tevalence Index I	s = 0.00).			

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand, Reduced Sand, Reduced Vertic (F18) (MLRA 159A) Type: D=Depth (Inches): Hydric Soil Present? Yes X No Masked Vertic (F18) (MLRA 159A) Type: D=Depth (Inches): Hydric Soil Present? Yes X No Masked Vertic (F18) (MLRA 159A) Type: D=Depth (Inches): Hydric Soil Was observed.	Depth inches)	Color (moist)	<u></u> %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histosol (A2) Histosol (A3) Histosol (A3) Histosol (A3) Histosol (A4) Histosol (A5) Histosol (A6) Histosol (A7) Histosol (A	0-20							Sandy Clay Loam	
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histosol (A2) Histosol (A3) Histosol (A3) Histosol (A3) Histosol (A4) Histosol (A5) Histosol (A6) Histosol (A7) Histosol (A									
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histosol (A2) Histosol (A3) Histosol (A3) Histosol (A3) Histosol (A4) Histosol (A5) Histosol (A6) Histosol (A7) Histosol (A					_				
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histosol (A2) Histosol (A3) Histosol (A3) Histosol (A3) Histosol (A4) Histosol (A5) Histosol (A6) Histosol (A7) Histosol (A									
Histosol (A1)	Type: C=C	oncentration, D=Dep	letion, RM=R	educed Matrix, M	 IS=Masked	Sand Grains.	² Location: P		
Histic Epipedon (A2) Black Histic (A3) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR P, T, U) Depleted Dark Surface (F7) 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 Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Thin Dark Surface (S9) (LRR S, T, U) Loamy Mucky Mineral (F1) (LRR O, P, T) Redox Depresal Artix (F2) Anomalous Bright Loamy Soils (F20) (MLRA 150A) Reduced Vertic (F18) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Stripped Matrix (S4) 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 Piedmont Floodplain Soils (F20) (MLRA 149A) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	•	`	icable to all L	•		,			•
Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A, Hydrogen Sulfide (A4) X Loamy Gleyed Matrix (F2) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR P, T, U) Depleted Dark Surface (F7) 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 Redox (A15) Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Redox Depressions (F8) Marl (F10) (LRR U) Depleted Dark Surface (F7) Redox Depressions (F8) Wery Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Popleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Sandy Mucky Mineral (S1) (LRR O, S) Selegend Matrix (S4) Reduced Vertic (F18) (MLRA 150A) Selegend Matrix (F2) Piedmont Floodplain Soils (F19) Marl (F10) (LRR O, P, T) Other (Explain in Remarks) Ploth (Explain in Remarks) Jumbric Surface (F13) (LRR O, P, T) Wetland hydrology must be present, unless disturbed or problematic. Anomalous Bright Loamy Soils (F20) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Hydric Soil Present? Yes X No Remarks:		, ,				, , ,			
Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Script 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 Redox (S5) Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Redox Dark Surface (A12) Depleted Matrix (F3) Mari (F10) (LRR U) Depleted Dark Surface (A12) Liron-Manganese Masses (F12) (LRR O, P, T) Delta Ochric (F13) (LRR O, F, T) Meri (F13) (LRR O, F, T, U) Sandy Mucky Mineral (S1) (LRR O, S) Stripped Matrix (S4) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No		,					· · ·		
Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A7) (LRR P, T, U) Stratified Layers (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF2) (MLRA 151B) Red Parent Material (TF2) (MLRA 151C) Red Parent Material (TF2) (MLRA 151D) Popleted Dark Surface (F1) Net Q Pressions (F8) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Itron-Manganese Masses (F12) (LRR O, P, T) Wetland hydrology must be present, unless disturbed or problematic. In the problematic of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Problematic of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. In the problematic of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. In the problematic of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. In the problematic of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. In the problematic of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. In the problematic of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. In the problematic of hydroph		, ,			-		(O)		
Organic Bodies (A6) (LRR P, T, U) Sem Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, T, U) Delta Ochric (F18) (MLRA 150B) Redox Depressions (F8) Marl (F10) (LRR U) Depleted Dark Surface (F12) Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Delta Ochric (F13) (LRR P, T, U) Delta Ochric (F13) (LRR P, T, U) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:		, ,			•				
5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Jindicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Delta Ochric (F17) (MLRA 151) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:		• • •	5 T III		,	•			ht Loamy Soils (F20)
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) Depleted Ochric (F11) (MLRA 151) 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 (F13) (MLRA 150A) Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:	<u> </u>	. , .				,			with (TEO)
1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A12) 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) Restrictive Layer (if observed): Type: Depth (inches): Common March (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Hydric Soil Present? Yes X No		. , ,				, ,			` '
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) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Iron-Manganese Masses (F12) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic.		, , ,	-		•				, ,
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) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Temarks:		. , ,					-43	Other (Explain i	n 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) Restrictive Layer (if observed): Type: Depth (inches): Denta Ochric (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 (S1) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No			ce (A11)		•	, .	•	3Indicators of	budranbutia vagatatian and
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) Restrictive Layer (if observed): Type: Depth (inches): 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) Hydric Soil Present? Yes X No Remarks:		` ,	(MI DA 450A)		•	,			
Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:					•	, .	, u)		
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:		, , ,	LRR (), S)			-	04 4500)		
Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:		. , ,			,		•		
Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:		, ,			-	, ,	-	NA 4500 450D)	
Type: Bepth (inches): Hydric Soil Present? Yes X No Remarks:		` ,	S, T, U)	Anoma	ious Brigrit	Loanly Solls (I	-20) (WILKA 14	9A, 153C, 153D)	
Depth (inches): Hydric Soil Present? YesX No	Restrictive	Layer (if observed):	:						
Depth (inches): Hydric Soil Present? YesX No	Type:								
Remarks:	• •	ches):					Hydrid	Soil Present? Yes	X No
		,					,		
A positive indication of hydric soil was observed.	Remarks:								
	A positive in	dication of hydric soi	l was observe	d.					

Project/Site:	Bluewater SPM	C	County:	Nueces		Sampling Date:	February 5, 2019
Applicant/Owner:	Lloyd Engineer		Stat		Texas	Sample Point:	•
· · · — — — — — — — — — — — — — — — — —	Bailey and l	N. Trivino	Section, Township	o. Range:		 N/.	
Landform (hillslope, terrace, etc			Local relief (conca	· · · —	none):		ppe (%): 0-5
0 1 ((((((((((((((((((None		Lat: 27.8				Datum: North American Datum 198
Soil Map Unit Name:		y loam, rarely flo			_	ssification:	
Are climatic / hydrologic conditi				YES		plain in Remarks	
Are Vegetation No ,			antly disturbed?			•	,
Are Vegetation No ,			ly problematic?			plain any answer	
				•		•	ŕ
SUMMARY OF FINDIN	105 - Attach Site map	Showing Sa	imping pom	Liocation	is, trans	ecis, importa	ant leatures, etc.
Hydrophytic Vegetation Prese	ent? Yes	NoX					
Hydric Soil Present?		No	Is the Samp	led Area			
Wetland Hydrology Present?	Yes	NoX	within a We	tland?	Yes	s	NoX
Remarks:							
HYDROLOGY	d not to be within a wetland du	to the lack of h	учернуне чеден	and weak	ana nyarotos		
Wetland hydrology India	cators:				Seconda	ry Indicators (mir	nimum of two required)
Primary Indicators (minimi	um of one is required; check al	ll that apply)			Sı	ırface Soil Cracks	s (B6)
Surface Water (A1)		Aquatic Fauna ((B13)		Sp	parsely Vegetated	d Concave Surface (B8)
High Water Table (A2)	Marl Deposits (E	315) (LRR U)		Dr	ainage Patterns ((B10)
Saturation (A3)		Hydrogen Sulfid	le Odor (C1)		Me	oss Trim Lines (B	i16)
Water Marks (B1)		Oxidized Rhizos	spheres on Living	Roots(C3)	Dr	y-Season Water	Table (C2)
Sediment Deposits		Presence of Re	duced Iron (C4)		Cr	ayfish Burrows (0	C8)
Drift Deposits (B3)		Recent Iron Rec	duction in Tilled S	oils (C6)	Sa	aturation Visible o	on Aerial Imagery (C9)
Algal Mat or Crust ((B4)	Thin Muck Surfa	ace (C7)		G	eomorphic Positio	on (D2)
Iron Deposits (B5)		Other (Explain i	n Remarks)		Sł	nallow Aquitard (E	03)
Inundation Visible o	on Aerial Imagery (B7)				FA	AC-Neutral Test (D5)
Water-Stained Leav	ves (B9)				Sp	hagnum moss (E	08) (LRR T, U)
Field Observations:							
Surface Water Present?	Yes NoX	Depth (inches	s): N/A				
Water Table Present?	Yes NoX	Depth (inches	s): >20				
Saturation Present?	Yes NoX	Depth (inches	s): >20	Wetland H	ydrology P	resent? Yes	NoX
(includes capillary fringe)							
Describe Recorded Data ((stream gauge, monitoring well	l, aerial photos, p	revious inspection	ns), if availab	le:		
Remarks:							
Nomanio.							
No positive indication of w	vetland hydrology was observe	d.					

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft)	% cover	Species?	Status	Number of Dominant Species	
4 14 04 4					That Are OBL, FACW, or FAC:	(A)
2.			-			(' '
3.					Total Number of Dominant	
4.					Species Across All Strata: 2	(B)
					Species / Microst / III Guida.	(5)
5					Percent of Dominant Species	
6	 		= Total Cover		That Are OBL, FACW, or FAC: 50%	(A/B)
	50% of total cover:		20% of total cover:	0	111dt 7tt C C D L, 1 7t C W, 01 1 7t C .	(705)
Sapling Stratum (Plot size:	30 ft.)		20% of total cover.		Prevalence Index Worksheet:	
1 Nana Observed					Total % Cover of: Multiply by:	
					OBL species 0 x 1 = 0	
2.					FACW species 10 x 2 = 20	
3.					FAC species 65 x 3 = 195	
4			-		FACU species 0 x 4 = 0	
5					UPL species 50 x 5 = 250	
6			= Total Cover		Column Totals: 125 (A) 465	—— (B)
	EOO/ of total agreem			0	Column Totals. 125 (A) 403	— (b)
Shrub Stratum (Plot size:	50% of total cover: 30 ft.)		20% of total cover:		Prevalence Index = B/A = 3.72	
1. Schinus terebinthifolia	<u> 30 II.</u>)	G.F.	Vaa	FAC	Frevalence index – B/A – 3.72	
		65	Yes	<u>FAC</u>	Hydrophytic Vegetation Indicators:	
2.						
3					1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%	
4			·		3 - Prevalence Index is ≤ 3.0 ¹	
5					Problematic Hydrophytic Vegetation ¹ (Explain)	
6			T + 1 0		Problematic Hydrophytic Vegetation (Explain)	'
	500/ 51 1		= Total Cover	40	1	
Harle Otractions (Distraction		32.5	20% of total cover:	13	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)	40	NI.	E 4 O 14 /	be present, unless disturbed or problematic.	
Andropogon glomeratus Bathriachlas isohoomy		10	No	FACW	Definitions of Five Vegetation Strata:	
2. Bothriochloa ischaemum		50	Yes	UPL	Tree - Woody plants, excluding woody vines,	
3					approximately 20 ft (6m) or more in height and 3 in.	
4					(7.6 cm) or larger in diameter at breast height (DBH).	
5					Sapling - Woody plants, excluding woody vines,	
6			-		approximately 20 ft (6 m) or more in height and less	
7			·		than 3 in. (7.6 cm) DBH.	
8			·		than o m. (7.5 cm) BBH.	
9					Shrub - Woody plants, excluding woody vines,	
10					approximately 3 to 20 ft (1 to 6 m) in height.	
11					approximately 5 to 20 ft (1 to 6 fil) in fleight.	
			= Total Cover		Herb - All herbaceous (non-woody) plants, including	
	50% of total cover:	30	20% of total cover:	12	herbaceous vines, regardless of size, <u>and</u> woody	
Woody Vine Stratum (Plot size:					plants, except woody vines, less than approximately	
1. None Observed					3 ft (1 m) in height.	
2					on (1 m) in neight.	
3					Woody vine - All woody vines, regardless of height.	
4					Woody vine - All woody vines, regardless of fleight.	
5						
	500/ -51 1 1		= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes NoX	
Remarks: (if observed, list m	orphological adaptati	ons below).			
No positive indication of hydro	ophytic vegetation wa	as observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).	
•	. -				·	
						I

	•	to the depth	needed to docu			onfirm the abs	ence of indicators.)		
Depth (inches)	Matrix Color (moist)		Color (n==:=4)		Features	Loc ²	Touture	Domostra	
(inches)	Color (moist)	<u>%</u> .	Color (moist)	<u> </u>	Type'		Texture	Remarks	
0-20	10Y_6/1_	<u>95</u>	7.5YR 3/3	5	C	M	Sandy Clay Loam		
Type: C=C	oncentration, D=Dep	oletion, RM=F	Reduced Matrix, M	IS=Maske	d Sand Grains.	² Location: P	L=Pore Lining, M=Matri	x.	
Hydric Soils	Indicators: (Appl	icable to all	LRRs, unless otl	herwise n	oted.)		Indicators for Probl	lematic Hydric Soils ³ :	
Histoso	l (A1)	Polyval	ue Below	Surface (S8) (L	.RR S, T, U)	J) 1 cm Muck (A9) (LRR O)			
Histic Epipedon (A2)			Thin Da	Thin Dark Surface (S9) (LRR S, T, U)			2 cm Muck (A10) (LRR S)		
Black Histic (A3)				Loamy Mucky Mineral (F1) (LRR O)			Reduced Vertic (F18) (outside MLRA 150A,B)		
Hydrogen Sulfide (A4)				X Loamy Gleyed Matrix (F2)			Piedmont Floodplain Soils (F19) (LRR P, S, T)		
Stratified Layers (A5)				X Depleted Matrix (F3)			Anomalous Bright Loamy Soils (F20)		
				Redox Dark Surface (F6)			(MLRA 153B)		
Organic Bodies (A6) (LRR P, T, U)									
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)		
	ed Below Dark Surfa	ce (A11)			(F11) (MLRA 1	-	2		
Thick Dark Surface (A12)				Iron-Manganese Masses (F12) (LRR 0			³ Indicators of hydrophytic vegetation and		
Coast Prairie Redox (A16) (MLRA 150A))Umbric	Umbric Surface (F13) (LRR P, T, U)			wetland hydrology must be present, unless disturbed or problematic.		
Sandy I	Mucky Mineral (S1)		•	7) (MLRA 151)		unicos distan	oca or problematio.		
Sandy (Gleyed Matrix (S4)		Reduce	ed Vertic (F18) (MLRA 15	0A, 150B)			
Sandy I	Redox (S5)		Piedmo	Piedmont Floodplain Soils (F19) (MLRA 149A)					
Strippe	d Matrix (S6)		Anoma	lous Brigh	t Loamy Soils (F20) (MLRA 14	9A, 153C, 153D)		
Dark Sı	urface (S7) (LRR P,	S, T, U)							
Restrictive	Layer (if observed)	:							
Type:									
Depth (in	ches):					Hydric Soil Present? Yes X No			
Remarks:									
A positive in	dication of hydric soi	il was observ	ed.						
•	·								

Project/Site:	Bluewater SPM	County:	Nueces	Sampling Date:	February 5, 2019
Applicant/Owner:	Lloyd Engineering		State: 1	Гехаs Sample Point:	DPB007_PSS
Investigator(s): C. I	Bailey and N. T	rivino Section, To	wnship, Range:	N/A	
Landform (hillslope, terrace, etc		Local relief	(concave, convex, non	ne): Concave Slope	(%): 0-5
Subregion (LRR or MLRA): _	None	Lat:	27.858828 Lor	ng: <u>-97.075517</u> Da	atum: North American Datum 1983
Soil Map Unit Name:	ljam clay lo	am, rarely flooded		NWI Classification:	N/A
, ,	ons on the site typical for this time	, ,		(if no, explain in Remarks.)	
Are Vegetation No,				rcumstances" present? Yes	
Are Vegetation No,	Soil No ,or Hydrology <u>N</u>	naturally problema	itic? (If ne	eded, explain any answers ir	Remarks.)
SUMMARY OF FINDIN	GS - Attach site map sh	owing sampling	point locations,	transects, importan	t features, etc.
Hydrophytic Vegetation Prese	nt? Yes X No				
Hydric Soil Present?			Sampled Area		
Wetland Hydrology Present?			a Wetland?	Yes X No	·
Remarks:					
This point was determined	to be within a wetland due to the	presence of all 3 wetland	d criteria		
Triis point was determined	to be within a wettand due to the	presence of all 5 welland	u Ciliella.		
HYDROLOGY Westland budgelessy ladio	ata va				
Wetland hydrology Indic			-	Secondary Indicators (minim	
	ım of one is required; check all tha			Surface Soil Cracks (E	·
X Surface Water (A1)		uatic Fauna (B13)	-	Sparsely Vegetated Co	, ,
High Water Table (A	· —	arl Deposits (B15) (LRR l drogen Sulfide Odor (C1	-	Drainage Patterns (B1	•
Saturation (A3) Water Marks (B1)		idized Rhizospheres on	•	Moss Trim Lines (B16) Dry-Season Water Tal	
Sediment Deposits (esence of Reduced Iron		Crayfish Burrows (C8)	, ,
Drift Deposits (B3)	· · · —	cent Iron Reduction in T	•	Saturation Visible on A	
Algal Mat or Crust (I		in Muck Surface (C7)	()	Geomorphic Position (, ,
Iron Deposits (B5)	· —	her (Explain in Remarks)	-)	Shallow Aquitard (D3)	,
	n Aerial Imagery (B7)	, ,	·	X FAC-Neutral Test (D5))
Water-Stained Leav	res (B9)		-	Sphagnum moss (D8)	(LRR T, U)
Field Observations:					
		Depth (inches):1	_		
Water Table Present?		Depth (inches): >20	_		
	'es NoX	Depth (inches): >20	_ Wetland Hydr	ology Present? Yes	X No
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, ae	rial photos, previous insp	pections), if available:		
Remarks:					
Remarks.					
A positive indication of we	tland hydrology was observed (at	least one primary indicat	or).		
	, ,		•		

Sampling Point: DPB007_PSS

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stretum (Diet size) 20 ft	% cover		Status	Number of Dominant Species	
Tree Stratum (Plot size: 30 ft.)	70 COVE	Species :	Status	•	.
1. None Observed		· — ·		That Are OBL, FACW, or FAC: (A))
2					
3		<u> </u>		Total Number of Dominant	
4				Species Across All Strata: (B))
5					
6.		· · ·		Percent of Dominant Species	
	0	= Total Cover		That Are OBL, FACW, or FAC: 100% (A/	'B)
50% of total cover		-	0	111017110 032,171011,011710.	٦,
		20% of total cover:		Prevalence Index Worksheet:	
Sapling Stratum (Plot size:30_ft)					- 1
1. None Observed		<u> </u>		Total % Cover of: Multiply by:	-
2		<u> </u>		OBL species 5 x 1 = 5	_
3		. <u>— — </u>		FACW species 0 x 2 = 0	_
4				FAC species 80 x 3 = 240	
5.		· .		FACU species 0 x 4 = 0	-
6.		· -		UPL species 0 x 5 = 0	-
·	0	= Total Cover		Column Totals: 85 (A) 245	- (B)
F00/		•	0	Column rotals (A)(A)	(ارا) -
50% of total cover	:0	20% of total cover:	<u> </u>		
Shrub Stratum (Plot size: 30 ft.)				Prevalence Index = B/A = 2.88	-
Schinus terebinthifolia	80	Yes	FAC		
2				Hydrophytic Vegetation Indicators:	
3.				1 - Rapid Test for Hydrophytic Vegetation	
4.				X 2 - Dominance Test is >50%	
5				X 3 - Prevalence Index is ≤ 3.0 ¹	
				Problematic Hydrophytic Vegetation ¹ (Explain)	
6		· _ · ·		Problematic Hydrophytic vegetation (Explain)	
		= Total Cover		4	
50% of total cover	:40	20% of total cover:	16	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size: 30 ft.)				be present, unless disturbed or problematic.	
1. Eleocharis palustris	5	Yes	OBL	Definitions of Five Vegetation Strata:	
2.				Tree - Woody plants, excluding woody vines,	
3.				approximately 20 ft (6m) or more in height and 3 in.	
				(7.6 cm) or larger in diameter at breast height (DBH).	
4		· · · · · · · · · · · · · · · · · · ·		(7.0 cm) of larger in diameter at breast height (DDH).	
5				Sapling - Woody plants, excluding woody vines,	
6					
7				approximately 20 ft (6 m) or more in height and less	
8		<u> </u>		than 3 in. (7.6 cm) DBH.	
9		. <u> </u>			
10				Shrub - Woody plants, excluding woody vines,	
11.		· .	<u> </u>	approximately 3 to 20 ft (1 to 6 m) in height.	
	5	= Total Cover			
50% of total cover		20% of total cover:	1	Herb - All herbaceous (non-woody) plants, including	
		20% of total cover.		herbaceous vines, regardless of size, and woody	
Woody Vine Stratum (Plot size: 30 ft.)				plants, except woody vines, less than approximately	
1. None Observed		<u> </u>			
2				3 ft (1 m) in height.	
3		<u> </u>			
4				Woody vine - All woody vines, regardless of height.	
5.					
	0	= Total Cover		Hydrophytic	
50% of total cover		-	0	Vegetation	
30 % Of total cover		20 % Of total cover.		_	
				Present? Yes <u>X</u> No	
Remarks: (if observed, list morphological adapta	tions below	·).			
A positive indication of hydrophytic vegetation wa	s observed	(>50% of dominant	snecies index	xed as OBL_FACW_or FAC)	
7 postavo maioation or rigaropriyato vogottation via	0 00001100	(* 0070 or dominant	opooloo ii idos	100 do 051, 171011, 011710).	
A positive indication of hydraphytic veget-ti	a abaamis -	(Provolones Index:	2 001		
A positive indication of hydrophytic vegetation wa	s observed	(Frevalence Index Is	s ≥ 3.00).		

SOIL

Sampling Point: DPB007_PSS

Depth (moles) Color (molest) % Color (molest) % Type* Loc* Texture 0-20 10Y. 6/1 95 7.5YR 3/3 5 C M Sandy City Lean 10Y. 6/1 95 7.5YR 3/3 5 C M Sandy City Lean 10Y. 6/1 95 7.5YR 3/3 5 C M Sandy City Lean 10Y. 6/1 95 7.5YR 3/3 5 C M Sandy City Lean 10Y. 6/1 95 7.5YR 3/3 5 C M Sandy City Lean 10Y. 6/1 95 7.5YR 3/3 5 C M Sandy City Lean 10Y. 6/1 95 7.5YR 3/3 5 C M Sandy City Lean 10Y. 6/1 95 7.5YR 3/3 5 C M Sandy City Lean 10Y. 6/1 95 7.5YR 3/3 5 C M M Sandy City Lean 10Y. 6/1 95 7.5YR 3/3 5 C M M Sandy City Lean 10Y. 6/1 95 7.5YR 3/3 5 C M M Sandy City Lean 10Y. 6/1 95 7.5YR 3/3 5 C M M Sandy City Lean 10Y. 6/1 95 7.5YR 3/3 5 C M M Sandy City Lean 10Y. 6/1 95 7.5YR 3/3 5 C M M Sandy City Lean 10Y. 6/1 95 7.5YR 3/3 5 C M M Sandy City Lean 10Y. 6/1 95 7.5YR 3/3 5 C M M Sandy City Lean 10Y. 6/1 95 7.5YR 3/3 5 C M M Sandy City Lean 10Y. 6/1 95 7.5YR 3/3 5 C M M Sandy City Lean 10Y. 6/1 95 7.5YR 3/3 5 C M M Sandy City Lean 10Y. 6/1 95 7.5YR 3/3 5 C M M Sandy City Lean 10Y. 6/1 95 7.5YR 3/3 5 C M M Sandy City Lean 10Y. 6/1 95 7.5YR 3/3 5 C M M Sandy City Lean 10Y. 6/1 95 7.5YR 3/3 5 C M M Sandy City Lean 10Y. 6/1 95 7.5YR 3/3 5 C M M Sandy City Lean 10Y. 6/1 95 7.5YR 3/3 5 C M M Sandy City Mark 16(1) (LRR 0, 5) 10Y. 95 7.5YR 3/3 5 C M M Sandy City Mark 16(1) (LRR 0, 5) 10Y. 95 7.5YR 3/3 5 C M M Sandy City Mark 16(1) (LRR 0, 5) 10Y. 95 7.5YR 3/3 5 C M M Sandy City Mark 16(1) (LRR 0, 5) 10Y. 95 7.5YR 3/3 5 C M M Sandy City Mark 16(1) (LRR 0, 5) 10Y. 95 7.5YR 3/3 5 C M M Sandy City Mark 16(1) (LRR 0, 5) 10Y. 95 7.5YR 3/3 5 C M M Sandy City Mark 16(1) (LRR 0, 5) 10Y. 95 7.5YR 3/3 5 C M M Sandy City Mark 16(1) (LRR 0, 5) 10Y. 95 7.5YR 3/3 5 C M M Sandy City Mark 16(1) (LRR 0, 5) 10Y. 95 7.5YR 3/3 5 C M M Sandy City Mark 16(1) (LRR 0, 5) 10Y. 95 7.5YR 3/3 5 C M M Sandy City Mark 16(1) (LRR 0, 5) 10Y. 95 7.5YR 3/3 5 C M M Sandy City Mark 16(1) (LRR 0, 5) 10Y. 95 7.5YR 3/3 5 C M M Sandy City Mark 16(1) (LRR 0, 5) 10Y. 95 7.5YR 3/3 5 C M M Sandy City Mark 16(1) (LRR 0, 5) 10Y. 95 7.5YR 3/4	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. PL=Pore Lining, M=Matrix. Indicators for Problematic Histosol (A1)	Remarks
Apdric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Polyvalue Below Surface (S8) (LRR S, T, U) Histosol (A2) Thin Dark Surface (S9) (LRR S, T, U) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Mucky Mineral (A7) (LRR P, T, U) Pepleted Dark Surface (F6) Muck Presence (A8) (LRR U) Tom Muck (A9) (LRR P, T) Depleted Delow Dark Surface (A12) Coast Prairie Redox (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 O, S) Anomalous Bright Loamy Anomalous Bright Loamy Soils (F20) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Anomalous Bright Loamy Soil Present? Yes X Remarks:	
Apdric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Polyvalue Below Surface (S8) (LRR S, T, U) Histosol (A2) Thin Dark Surface (S9) (LRR S, T, U) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Mucky Mineral (A7) (LRR P, T, U) Pepleted Dark Surface (F6) Muck Presence (A8) (LRR U) Tom Muck (A9) (LRR P, T) Depleted Delow Dark Surface (A12) Coast Prairie Redox (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 O, S) Anomalous Bright Loamy Anomalous Bright Loamy Soils (F20) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Anomalous Bright Loamy Soil Present? Yes X Remarks:	
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Histosol (A1) Histic Epipedon (A2) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Depleted Matrix (F3) Anomalous Bright Loam (MLRA 153B) Fed Matrix (A9) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (C Piedmont Floodplain Sc Anomalous Bright Loam (MLRA 153B) Red Parent Material (T1 Muck Presence (A8) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (T1 Muck (A9) (LRR P, T) Depleted Depleted Ochric (F11) (MLRA 151) 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, T, U) Depleted Ochric (F13) (LRR D, T, U) Depleted Ochric (F13) (LRR P, T, U) Depleted Ochric (F13) (LRR P, T, U) Depleted Ochric (F13) (MLRA 150A, 150B) Sandy Mucky Mineral (S1) Sandy Redox (S5) Piedmont Floodplain Sc Anomalous Bright Loamy Petro Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Reduced Vertic (F18) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X	c Hydric Soils ³ :
Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Depleted Dark Surface (F6) 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 Redox (S5) Sardy Redox (S5) Sardy Redox (S5) Dark Surface (S9) (LRR S, T, U) Loamy Mucky Mineral (F1) (LRR O) Reduxed Matrix (F2) Piedmont Floodplain Sc Anomalous Bright Loam (MLRA 153B) Redox Dark Surface (F6) Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Rema Other (Explain in Rema Other (F1)) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Sci (F20) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X	•
Black Histic (A3)	•
Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Beleted Matrix (F3) Redox Dark Surface (F6) Muck Presence (A8) (LRR U) Redox Depressions (F8) Very Shallow Dark Surface (A1 Cexplain in Rema 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) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X Loamy Gleyed Matrix (F2) Piedmont Floodplain Soil Anomalous Bright Loam (MLRA 153B) Redox Dark Surface (F7) Red Parent Material (TF (MLRA 151) Popleted Dark Surface (F7) Red Parent Material (TF (MLRA 151) Sindicators of hydropl wetland hydrology muncless disturbed or p Belate Ochric (F17) (MLRA 150A) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X	•
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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Redox Depressions (F8) Very Shallow Dark Surface (F7) Red Parent Material (TF (MLRA 151) Tother Carlon (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Wetland hydrology mu unless disturbed or p Delta Ochric (F17) (MLRA 150A) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loam Anomalous Bright Loam (MLRA 153B) Red Parent Material (TF (MLRA 151) Tother (Explain in Rema 3 Indicators of hydropl wetland hydrology mu unless disturbed or p Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X	•
Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Dark Surface (F7) Marl (F10) (LRR U) Depleted Dorric (F11) (MLRA 151) 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) Redox Depressions (F8) Need Parent Material (TF Redox Depressions (F8) Very Shallow Dark Surface (F7) Need Parent Material (TF Redox Dark Surface (F7) Redox Dark Surface (F13) (LRR D, T, U) Pelta Ochric (F13) (LRR P, T, U) Wetland hydrology munices disturbed or punices	
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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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Marl (F10) (LRR U) Marl (F10) (LRR U) Other (Explain in Rema O	TE2)
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Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X Wetland hydrology muchless disturbed or p wetland hydrology muchless disturbed or p 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) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X	nhytic vegetation and
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) Restrictive Layer (if observed): Type: Depth (inches): Depth (inches): Temarks:	
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Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Hydric Soil Present? Yes X Remarks:	
Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? YesX	
Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X Remarks:	
Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X Remarks:	
Type: Hydric Soil Present? YesX X Remarks:	
	No
positive indication of hydric soil was observed.	

Project/Site:	Bluewater SPM	County:	Nueces	s Samp	oling Date:	February 5, 2019
Applicant/Owner:	Lloyd Engineerii	ng	State:	Texas Sam	ple Point:	DPB008_PEM
Investigator(s): C.	Bailey and N	. Trivino Section	, Township, Range:		N/A	
Landform (hillslope, terrace, et		er Local re	elief (concave, convex	, none): Concav	ve Slope (%):0-5
Subregion (LRR or MLRA):	None	Lat:	27.862716	Long:97.07	79395 Datu	m: North American Datum 1983
Soil Map Unit Name:	ljam clay	loam, rarely flooded		NWI Classifica	tion:	E2USN
Are climatic / hydrologic condit	tions on the site typical for this tir		No) YES	(if no, explain i	,	
Are Vegetation No	· · · · · -			-	_	
Are Vegetation No	,Soil No ,or Hydrology _	No naturally probl	ematic?	If needed, explain a	any answers in R	emarks.)
SUMMARY OF FINDIN	NGS - Attach site map	showing samplii	ng point locatio	ns, transects,	important f	eatures, etc.
Hydrophytic Vegetation Prese	ent? Yes X N	do				
Hydric Soil Present?		No Is	the Sampled Area			
Wetland Hydrology Present?			thin a Wetland?	Yes)	(No	
Wolland Hydrology 1 10001kt.	100 <u>X</u>		ann a vvotiana.	700	<u> </u>	
Remarks:		•				
This point was determine	d to be within a wetland due to t	no processo of all 2 we	tland critoria			
i nis point was determine	d to be within a wetland due to t	ne presence of all 3 we	tiand criteria.			
HYDROLOGY						
Wetland hydrology Indi	cators:			Secondary Indi	cators (minimum	of two required)
Primary Indicators (minim	num of one is required; check all	that apply)			Soil Cracks (B6)	
X Surface Water (A1)	· —	Aquatic Fauna (B13)			-	cave Surface (B8)
High Water Table (· · · —	Marl Deposits (B15) (L		Drainage	Patterns (B10)	
Saturation (A3)	<u>X</u>	Hydrogen Sulfide Odor	(C1)	Moss Tri	m Lines (B16)	
Water Marks (B1)		Oxidized Rhizospheres	on Living Roots(C3)	Dry-Seas	son Water Table	(C2)
Sediment Deposits	(B2)	Presence of Reduced I	ron (C4)	Crayfish	Burrows (C8)	
Drift Deposits (B3)	!	Recent Iron Reduction	in Tilled Soils (C6)	Saturatio	on Visible on Aer	ial Imagery (C9)
Algal Mat or Crust	(B4)	Thin Muck Surface (C7	")	Geomor	ohic Position (D2	()
Iron Deposits (B5)		Other (Explain in Rema	arks)	Shallow	Aquitard (D3)	
Inundation Visible o	on Aerial Imagery (B7)			X FAC-Nei	utral Test (D5)	
Water-Stained Lea	ves (B9)			Sphagnu	ım moss (D8) (L	RR T, U)
Field Observations:						
	YesX No	Depth (inches):	2			
	Yes NoX		20			
	Yes NoX	Depth (inches):>	20 Wetland	Hydrology Present	? Yes <u>X</u>	No
(includes capillary fringe)						
Describe Recorded Data	(stream gauge, monitoring well,	aerial photos, previous	inspections), if availa	ble:		
Barrandan						
Remarks:						
A positive indication of we	etland hydrology was observed (at least one primary inc	dicator).			
, , poolar o maioanom or m	ruana nyaronogy mao oboontou (at loadt died printary inte				
Aquatic Fauna: fish.						
7 (4444) 7 44141 115111						

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft.)	% cover	Species?	Status	Number of Dominant Species	
4 44 64 4	,				That Are OBL, FACW, or FAC:	(A)
2.						` ′
3.			· <u></u>		Total Number of Dominant	
4.						(B)
5.					<u> </u>	`
6.					Percent of Dominant Species	
		0	= Total Cover		·	(A/B)
	50% of total cover:		20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)		,		Prevalence Index Worksheet:	
1 Nana Observed	,				Total % Cover of: Multiply by:	
2.					OBL species 60 x 1 = 60	
3.					FACW species 0 x 2 = 0	
4.					FAC species 0 x 3 = 0	
5.					FACU species 0 x 4 = 0	
6.					UPL species 0 x 5 = 0	
		0	= Total Cover		Column Totals: 60 (A) 60	— (B)
	50% of total cover:		20% of total cover:	0		``
Shrub Stratum (Plot size:			. 2070 01 10101 007011		Prevalence Index = B/A = 1.00	
1. None Observed						
2.	-				Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
4.					X 2 - Dominance Test is >50%	
5.					X 3 - Prevalence Index is $\leq 3.0^{1}$	
					Problematic Hydrophytic Vegetation ¹ (Explain)	
6			= Total Cover		residinate riyarophytic vogotation (Explain)	
	50% of total cover:		20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:			20 % Of total cover.		be present, unless disturbed or problematic.	
4. On antina a thanniff and		60	Yes	OBL	Definitions of Five Vegetation Strata:	
				OBL	Tree - Woody plants, excluding woody vines,	
2.						
3					approximately 20 ft (6m) or more in height and 3 in.	
4					(7.6 cm) or larger in diameter at breast height (DBH).	
5					Sapling - Woody plants, excluding woody vines,	
6					approximately 20 ft (6 m) or more in height and less	
7		-			than 3 in. (7.6 cm) DBH.	
8					a.a., 6 m. (1.6 s) 22 m	
9					Shrub - Woody plants, excluding woody vines,	
10					approximately 3 to 20 ft (1 to 6 m) in height.	
11			T		approximately 5 to 25 ft (1 to 5 fil) in height.	
	500/ -54 - 1		= Total Cover	40	Herb - All herbaceous (non-woody) plants, including	
W 1 - 1 - 0 - 1 - 1 - 1	50% of total cover:	30	20% of total cover:	12	herbaceous vines, regardless of size, <u>and</u> woody	
Woody Vine Stratum (Plot size					plants, except woody vines, less than approximately	
1. None Observed					3 ft (1 m) in height.	
2					3 it (1 iii) iii neight.	
3.					Woody vine - All woody vines, regardless of height.	
4					Woody Ville - All Woody Villes, regardless of fielgrit.	
5			T			
	500/ - 51-1-1		= Total Cover	0	Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes <u>X</u> No	
December 25 1 1 2 2			\			
Remarks: (if observed, list n	norphological adaptati	ons below).			
A positive indication of hydro	phytic vegetation was	observed	(>50% of dominant	species index	ked as OBL, FACW, or FAC).	
A positive indication of hydro	phytic vegetation was	observed	(Prevalence Index is	s ≤ 3.00).		
·						

SOIL

Sampling Point: DPB008_PEM

Lock (motel)	Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks 0-20 10YR 4/2 80 10YR 4/6 20 C PL Sandy Loam Vype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 2Location: PL=Pore Lining, M=Matrix. Vydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratiffed Layers (A5) Depleted Matrix (F3) Organic Bodies (A6) (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) Depleted Below Dark Surface (A12) Tinch Mark Surface (A12) Tinch Mark Surface (A12) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR P, S) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Reduced Vertic (F13) (MLRA 151) Depleted Matrix (S4) Reduced Vertic (F13) (MLRA 151) Depleted Matrix (S4) Reduced Vertic (F13) (MLRA 151) Depleted Selow Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) 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) Poeth (inches): Hydric Soil Present? Yes X No Pemarks:	Profile Desc Depth	Matrix	, to the depth	needed to doc	Redox F		ommini ule ause	ence of indicators.)	
Topic Concentration Depetion RM=Reduced Matrix, MS=Masked Sand Grains. Cocation: PL=Pore Lining, M=Matrix. Indicators (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils Indicators (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils Computation Computati	O-20 10YR 4/2 80 10YR 4/6 20 C PL Sandy Loam Vype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. O-20 C PL Sandy Loam Vype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. O-20 C PL Sandy Loam Vype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. O-20 C PL Sandy Loam Vype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. O-20 C PL Sandy Loam Indicators for Problematic Hydric Soils S: Indicators for Problematic Hydric Soils F: Indicators for Problematic Hydric Soils S: Indicators for Problematic Hydric Soils F: Indicators for Problematic Hydric Soils F: Indicators for Problematic Hydric Soils F: Indicators for Problematic Hydric Soils Present? Yes X No Indicators for Problematic Hydric Soils Present? Yes X No Indicators for Problematic Hydric Soils Present? Yes X No Indicators for Problematic Hydric Soils Present? Yes X No Indicators for Problematic Hydric Soils Present? Yes X No Indicators for Problematic Hydric Soils Present? Yes X No Indicators for Problematic Hydric Soils Present? Yes X No Indicators for Problematic Hydric Soils Present? Yes X No Indicators for Problematic Hydric Soils Present? Yes X No Indicators for Problematic Hydric Hurch Hydric Soil Present? Yes X No Indicators for Problematic Hydric Hurch Hydric Soil Present? Yes X No Indicators for Problematic Hydric Hurch Hydric Soil Present? Yes X No Indicators for Problematic Hydric Hurch Hydric Soil Present? Yes X No Indicators for Problematic Hydric Hurch Hurch Hurch Hurch Hurch Hurch	•		<u></u> -	Color (moist)			L oc ²	Texture	Remarks
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. **Location: PL=Pore Lining, M=Matrix.** ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									romano
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	0-20	1011(4/2		10111 4/0				Carray Loan	
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	Type: C=Co	oncentration. D=De	pletion. RM=R	educed Matrix. N	 1S=Maske	d Sand Grains.	² Location: PI	_=Pore Lining, M=Matri	x.
Histosol (A1)	Histosol (A1)									
Histic Epipedon (A2) Black Histic (A3) Black Histic (A3) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Depleted Matrix (F2) Muck Presence (A8) (LRR P, T, U) Depleted Dark Surface (F7) 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 Gleyed Matrix (F3) Anomalous Bright Loamy Soils (F20) Murk Presence (A8) (LRR P, T) Depleted Dark Surface (F7) Marl (F10) (LRR U) Depleted Dark Surface (F7) 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) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Setrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Histic Epipedon (A2) Black Histic (A3) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F6) Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Depleted Operation (S1) Redox Depressions (F8) Depleted Dark Surface (F7) Marl (F10) (LRR U) Depleted Operation (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Delta Ochric (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Sandy Mucky Mineral (S1) (LRR O, S) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Destrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Thin Dark Surface (S1) (LRR P, S, T, U) 2 cm Muck (A10) (LRR O, S) Reduced Vertic (F18) (MLRA 149A, 153C, 153D)	-					-	RRSTU)		•
Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A, Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) Muck Presence (A8) (LRR P, T, U) Pepleted Dark Surface (F6) Muck Presence (A8) (LRR P, T) Depleted Delva Surface (F7) Redox Depressions (F8) 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) Dark Surface (S7) (LRR P, S, T, U) Redox Depressions (F8) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Weltand Nydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Reduced Vertic (F18) (MLRA 150A) 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) Prye: Depth (inches): Hydric Soil Present? Yes X No Reduced Vertic (F18) (MLRA 149A, 153C, 153D)	Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Muck Presence (A8) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) 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 Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Destrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Reduced Vertic (F18) (outside MLRA 150A Reduced Vertic (F10) (LRR O, Piedmont Floodplain Soils (F19) (MLRA 153B) Reduced Vertic (F18) (MLRA 153B) Reduced Vertic (F19) (MLRA 153B) Reduce (F7) Redox Depleted Matrix (F3) Loamy Surface (F7) Unbric Surface (F7) Unbric Surface (F12) (LRR O, P, T) Unbric Surface (F13) (LRR P, T, U) Unbric Surface (F13) (LRR P,						` , .			
Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Scord Mucky Mineral (A7) (LRR P, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S4) X Sandy Redox (S7) Depleted Matrix (S4) X Sandy Redox (S7) Depleted Matrix (S6) Depleted Matrix (F2) Depleted Matrix (F2) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Delta Ochric (F17) (MLRA 151) Sandy Mucky Mineral (S1) (LRR O, S) Sirripped Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Sestrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Piedmont Floodplain Soils (F19) (LRR P, S, Anomalous Bright Loamy Soils (F20) (Present? Yes X No	Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Scr Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Anomalous Bright Loamy Soils (F20) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Marl (F10) (LRR U) Depleted Depleted Dark Surface (F7) 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) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Anomalous Bright Loamy Soils (F19) (MLRA 151 Present? Yes X No Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A) From Mucky Mineral (S1) (LRR P, T, U) Delta Ochric (F17) (MLRA 150A) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No		, ,					•		• •
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Organic Bodies (A6) (LRR P, T, U) Setrictive Layer (if observed): Type: Deptat (A7) (LRR P, S, T, U) Redox Dark Surface (F6) Red Parent Material (TF2) Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 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) X Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Setrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No (MLRA 153B) (MLRA 153B) Red Parent Material (TF2) Very Shallow Dark Surface (F13) (LRR P, T, U) Other (Explain in Remarks) Jindicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Slandy Redox (A16) (MLRA 150A) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Betrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Organic Bodies (A6) (LRR P, T, U) Set 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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Destrictive Layer (if observed): Type: Depth (inches): Mark (SAP, T, U) Depleted Dark Surface (F6) Red Parent Material (TF2) (MLRA 153B) Red Parent Material (TF2) (MLRA 153B) Red Parent Material (TF2) Mark (F10) (LRR U) Depleted Dark Surface (F1) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Othe		, ,		Loamy	Gleyed Ma	atrix (F2)			, , ,
5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox Depressions (F8) Wery Shallow Dark Surface (TF12) Other (Explain in Remarks) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Jindicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sandy Mucky Mineral (S1) (LRR O, S) 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) Pietrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Piedmarks:	5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox Ospital Surface (F17) (MLRA 150A) Sandy Redox (A16) (MLRA 150A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, T, U) Delta Ochric (F17) (MLRA 150A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D) Destrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Red Parent Material (TF2) Red Parent Material (TF2) Red Parent Material (TF2) Very Shallow Dark Surface (F12) Other (Explain in Remarks) Inchemarks Nomelous Prairie (F12) Very Shallow Dark Surface (F12) Other (Explain in Remarks) Other	Stratifie	d Layers (A5)		Deplete	ed Matrix (F3)		Anomalous Brig	ht Loamy Soils (F20)
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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Estrictive Layer (if observed): Type: Depth (inches): Redox Depressions (F8) Very Shallow Dark Surface (F12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. 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 hydr	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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Detta Ochric (F18) Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Person No Control (TF12) Nother (Explain in Remarks) Other (Explain in	Organic	Bodies (A6) (LRR	P, T, U)	Redox	Dark Surfa	ace (F6)		(MLRA 153B)	
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estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No emarks:	estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No emarks:	Stripped	d Matrix (S6)		Anoma	lous Brigh	t Loamy Soils (F	(20) (MLRA 149	A, 153C, 153D)	
								Hydric	Soil Present? Yes _	X No
positive indication of hydric soil was observed.	positive indication of hydric soil was observed.	emarks:								
		positive inc	dication of hydric so	il was observe	d					
		, pool		0200	<u>.</u>					

Project/Site:	ſ	Bluewater SPM		County:	Nueces	8	Sampling [Date: F	ebruary 5, 2019
Applicant/Owner:			gineering		State:	Texas		oint:	DPB009_U
Investigator(s):	C. Bailey	and	N. Trivino	Section, Tow	nship, Range: _			N/A	
Landform (hillslope, terrace	, etc.):	Hills	slope	_ Local relief (c	concave, convex	, none): _	Convex	Slope (%):	0-5
Subregion (LRR or MLRA):		No	one	Lat:	27.862599	Long: _	-97.079480	Datum	1: North American Datum 1983
Soil Map Unit Name:		lja	am clay loam, rarely				Classification:		N/A
Are climatic / hydrologic cor			•	,		`	explain in Ren	,	
	,Soil	,or Hydrol		-	ed? Are "Norm		-		
Are Vegetation No	,Soil	,or Hydrol	logy <u>No</u> natu	ırally problemati	c?	(If needed,	explain any ar	iswers in Re	marks.)
SUMMARY OF FINE	DINGS -	Attach site	map showing	sampling p	oint locatio	ns, tran	sects, imp	ortant fe	atures, etc.
Hydrophytic Vegetation Pr	esent?	Yes	No <u>X</u>						
Hydric Soil Present?		Yes X	 No		ampled Area				
Wetland Hydrology Preser	nt?	Yes		within a	Wetland?	Υ	'es	No_	X
Remarks:									
This point was determ	ined not to	be within a wetla	nd due to the lack of	f hydrophytic ve	getation and we	tland hvdro	loav.		
i i i i i i i i i i i i i i i i i i i	mod not to	DO WIGHIN & WORK	The data to the lack of	i ilyaropilyao vo	gotation and wo	uana nyaro	logy.		
HADBOI OCA									
HYDROLOGY Wetland hydrology li	ndicators:					Casan	don Indicator	/minimum a	of two required)
Primary Indicators (mi			neck all that anniv)				Surface Soil C		of two required)
Surface Water (ric is required, or	Aquatic Faun	na (B13)	_			, ,	ive Surface (B8)
High Water Tab				s (B15) (LRR U))		Drainage Patt		ive duriade (Bo)
Saturation (A3)	10 (712)			Ifide Odor (C1)			Moss Trim Lin		
Water Marks (B	1)			, ,	iving Roots(C3)		Dry-Season W		C2)
Sediment Depos	•			Reduced Iron (0	- , ,		Crayfish Burro	,	/
Drift Deposits (E				Reduction in Till	*		-	, ,	l Imagery (C9)
Algal Mat or Cru	•		Thin Muck Su		` '		Geomorphic F		0 , (,
Iron Deposits (B	35)		Other (Explai	in in Remarks)			Shallow Aquita	ard (D3)	
Inundation Visib	le on Aeria	I Imagery (B7)					FAC-Neutral 1	est (D5)	
Water-Stained I	_eaves (B9)					Sphagnum mo	oss (D8) (LR	R T, U)
Field Observations:									
Surface Water Present?	Yes		X Depth (inch						
Water Table Present?	Yes		X Depth (inch		.				
Saturation Present? (includes capillary fringe)	Yes	No	X Depth (inch	nes): >20	Wetland	Hydrology	Present?	Yes	NoX
. , , ,									
Describe Recorded Da	ita (stream	gauge, monitorin	ig well, aerial photos	s, previous inspe	ections), if availa	ble:			
Remarks:									
Nomano.									
No positive indication	of wetland	hydrology was ob	served.						
•									

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft.)	% cover	Species?	Status	Number of Dominant Species	
4. None Observed					·	A)
2.			·			-,
3			·		Total Number of Dominant	
4.			-			В)
					Cpecies / toross / tir otrata.	υ,
5.					Percent of Dominant Species	
6		0	= Total Cover		•	A/B)
	EON of total agreem			0	That Are OBE, I ACW, OF I AC.	~(0)
Carling Charters (Distains)	50% of total cover:		20% of total cover:	0	Prevalence Index Worksheet:	
Sapling Stratum (Plot size:	30 ft.)					
1. None Observed			·		Total % Cover of: Multiply by:	_
2					OBL species <u>5</u> x 1 = <u>5</u>	_
3.					FACW species	_
4					FAC species 10 x 3 = 30	_
5					FACU species 30 x 4 = 120	_
6					UPL species 50 x 5 = 250	_
			= Total Cover		Column Totals: (A) 405	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = 4.26	_
1. None Observed						
2					Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
4.					2 - Dominance Test is >50%	
5.					3 - Prevalence Index is ≤ 3.0 ¹	
6.					Problematic Hydrophytic Vegetation ¹ (Explain)	
		0	= Total Cover			
	50% of total cover:		20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)		2070 01 10101 00701.		be present, unless disturbed or problematic.	
Trifolium repens	<u> </u>	30	Yes	FACU	Definitions of Five Vegetation Strata:	
Ambrosia psilostachya		10	No	FAC	Tree - Woody plants, excluding woody vines,	
3. Cirsium texanum		5	No	UPL	approximately 20 ft (6m) or more in height and 3 in.	
4. Heterotheca subaxillaris	·	<u>5</u>				
	·		No Yes	UPL	(7.6 cm) or larger in diameter at breast height (DBH).	
5. Bothriochloa ischaemum		40	Yes	UPL	Sapling - Woody plants, excluding woody vines,	
6. Borrichia frutescens		5	No	OBL	approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8					tian 3 in. (7.0 cm) DBH.	
9					Charle Woody plants evaluding woody vines	
10					Shrub - Woody plants, excluding woody vines,	
11					approximately 3 to 20 ft (1 to 6 m) in height.	
			= Total Cover		Harb All back as a configuration of Australia in challenge	
	50% of total cover:	47.5	20% of total cover:	19	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:	30 ft)				herbaceous vines, regardless of size, <u>and</u> woody	
1. None Observed					plants, except woody vines, less than approximately	
2					3 ft (1 m) in height.	
3						
4					Woody vine - All woody vines, regardless of height.	
5						
		0	= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
	•		•		Present? Yes No X	
Remarks: (if observed, list mo	orphological adaptation	ons below).		-	
•		,				
No positive indication of hydro	pnytic vegetation wa	s observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).	

Depth	Matrix				eatures		ence of indicators.)	
inches)	Color (moist)	<u></u> %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-20	10YR 4/2	80	10YR 4/6	20	C	PL	Sandy Loam	. tomano
Type: C=C	Concentration, D=Dep		educed Matrix, N	 1S=Maske	d Sand Grains.	² Location: P	L=Pore Lining, M=Matri	ix.
Hydric Soil	s Indicators: (Appl	icable to all I	_RRs, unless ot	herwise n	oted.)			lematic Hydric Soils ³ :
Histoso	ol (A1)		Polyva	lue Below	Surface (S8) (L	.RR S, T, U)	1 cm Muck (A9)	(LRR O)
Histic I	Epipedon (A2)		Thin D	ark Surfac	e (S9) (LRR S,	T, U)	2 cm Muck (A10	0) (LRR S)
Black I	Histic (A3)		Loamy	Mucky Mir	neral (F1) (LRF	t O)	Reduced Vertic	(F18) (outside MLRA 150A
Hydrog	gen Sulfide (A4)		Loamy	Gleyed Ma	atrix (F2)		Piedmont Flood	lplain Soils (F19) (LRR P, S,
Stratifi	ed Layers (A5)		Deplete	ed Matrix (F3)		Anomalous Brig	ht Loamy Soils (F20)
Organi	c Bodies (A6) (LRR	P, T, U)	Redox	Dark Surfa	ace (F6)		(MLRA 153B)	
5 cm N	Mucky Mineral (A7) (L	RR P, T, U)	Deplete	ed Dark Su	ırface (F7)		Red Parent Mat	terial (TF2)
Muck F	Presence (A8) (LRR	U)	Redox	Depressio	ns (F8)		Very Shallow D	ark Surface (TF12)
1 cm N	Muck (A9) (LRR P, T))	Marl (F	10) (LRR	U)		Other (Explain i	n Remarks)
Deplet	ed Below Dark Surfa	ice (A11)	Deplete	ed Ochric (F11) (MLRA 1	51)		
Thick [Dark Surface (A12)		Iron-Ma	anganese l	Masses (F12)	(LRR O, P, T)		hydrophytic vegetation and
Coast	Prairie Redox (A16)	(MLRA 150A)	Umbrio	Surface (I	F13) (LRR P, T	', U)		ology must be present, bed or problematic.
Sandy	Mucky Mineral (S1)	(LRR O, S)	Delta C	Ochric (F17) (MLRA 151)		นเมธิรริ นเรโนไไ	oca or problematic.
Sandy	Gleyed Matrix (S4)		Reduce	ed Vertic (F	=18) (MLRA 15	0A, 150B)		
X Sandy	Redox (S5)		Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A)		
Strippe	ed Matrix (S6)		Anoma	lous Brigh	t Loamy Soils (F20) (MLRA 14 9	9A, 153C, 153D)	
Type: Depth (ir						Hydrid	Soil Present? Yes	X No
Deptii (ii						liyan	Commesent: res_	NO
Remarks:								
A positive in	ndication of hydric so	il was observe	ed.					

Project/Site:	Bluewater SPM	Cou	nty:	Nueces	Sam	pling Date:	February 5, 2019
Applicant/Owner:	Lloyd Engineerii	ng	State:		Texas San	nple Point:	DPB010_U
Investigator(s): C.	Bailey and N	. Trivino Sec	tion, Township,	Range:		N/A	
Landform (hillslope, terrace, et		Loc	al relief (concav	e, convex, no	one): Conve	ex Slope (%	o): <u>0-5</u>
Subregion (LRR or MLRA):	None		Lat: 27.862	2614 L	.ong:97.0	80360 Datu	m: North American Datum 1983
Soil Map Unit Name:		loam, rarely floode			_ NWI Classifica	ation:	E2USP
Are climatic / hydrologic condit	ions on the site typical for this ti				_(if no, explain	,	
Are Vegetation No			-			_	
Are Vegetation No	,Soil No ,or Hydrology _	No naturally p	oroblematic?	(If r	needed, explain	any answers in R	emarks.)
SUMMARY OF FINDIN	NGS - Attach site map	showing sam	pling point	locations	s, transects	, important f	eatures, etc.
Hydrophytic Vegetation Prese	ent? Yes X	No					
Hydric Soil Present?	Yes X	No	Is the Sample	d Area			
Wetland Hydrology Present?			within a Wetla		Yes	No	x
Remarks:							
This point was determined	d not to be within a wetland due	to the lack of wetla	and hydrology				
This point was determined	d not to be within a wetland due	to the lack of wella	ina nyarology.				
HYDROLOGY							
Wetland hydrology Indi						•	of two required)
	um of one is required; check all	,				Soil Cracks (B6)	
Surface Water (A1)	· ——	Aquatic Fauna (B1:	•			_	cave Surface (B8)
High Water Table (· ·	Marl Deposits (B15				e Patterns (B10)	
Saturation (A3)		Hydrogen Sulfide C	, ,	. (00)		im Lines (B16)	(00)
Water Marks (B1)		Oxidized Rhizospho	_	oots(C3)		son Water Table	(C2)
Sediment Deposits	· · · —	Presence of Reduc		I- (OC)		Burrows (C8)	;-l l (CO)
Drift Deposits (B3)		Recent Iron Reduct		IS (C6)		on Visible on Aer	, ,
Algal Mat or Crust (· · —	Thin Muck Surface	, ,			phic Position (D2	2)
Iron Deposits (B5)		Other (Explain in R	temarks)			Aquitard (D3)	
	on Aerial Imagery (B7)					utral Test (D5)	DD T IIV
Water-Stained Lea	ves (ba)				Spiragin	um moss (D8) (L	KK 1, 0)
Field Observations:							
	Yes No X	Depth (inches):	N/A				
	Yes No X	Depth (inches):	>20				
	Yes NoX	Depth (inches):		Wetland Hy	drology Presen	t? Yes	No X
(includes capillary fringe)							
Describe Recorded Data	(stream gauge, monitoring well,	aerial photos, prev	ious inspections), if available	:		
Remarks:							
No positive indication of v	vetland hydrology was observed	•					

Sampling Point:	DPB010_U
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		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft \	% cover	Species?	Status	Number of Dominant Species	
		70 COVE	Оресіез:	Otatus	·	(A)
					That Ale OBL, FACW, OF FAC.	(A)
2					T. (1) (5)	
3.					Total Number of Dominant	
4					Species Across All Strata: 3	(B)
5						
6	 				Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC: 100%	(A/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1. None Observed					Total % Cover of: Multiply by:	
2.	.				OBL species 35 x 1 = 35	
3.			·		FACW species 10 x 2 = 20	
4.					FAC species 30 x 3 = 90	
5.					FACU species 0 x 4 = 0	
					UPL species 0 x 5 = 0	
6			= Total Cover		Column Totals: 75 (A) 145	— (B)
	500/ aftatal assume			0	Column Totals (A)	— (^b)
Charle Charles (Dist size)	50% of total cover:		20% of total cover:		Decidence Index = D/A = 4.02	
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = 1.93	—
1. None Observed	-					
2					Hydrophytic Vegetation Indicators:	
3					1 - Rapid Test for Hydrophytic Vegetation	
4					X 2 - Dominance Test is >50%	
5					X 3 - Prevalence Index is ≤ 3.0 ¹	
6			<u> </u>		Problematic Hydrophytic Vegetation ¹ (Explain)	
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
1. Tridens albescens		30	Yes	FAC	Definitions of Five Vegetation Strata:	
2. Borrichia frutescens		20	Yes	OBL	Tree - Woody plants, excluding woody vines,	
3. Distichlis littoralis		15	Yes	OBL	approximately 20 ft (6m) or more in height and 3 in.	
4. Lycium carolinianum		10	No	FACW	(7.6 cm) or larger in diameter at breast height (DBH).	
5	-				(1.0 dill) of larger in diameter at breast neight (BBH).	
6.					Sapling - Woody plants, excluding woody vines,	
					approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8						
9					Shrub - Woody plants, excluding woody vines,	
10					approximately 3 to 20 ft (1 to 6 m) in height.	
11					approximately 6 to 20 ft (1 to 6 fil) in height.	
			= Total Cover		Herb - All herbaceous (non-woody) plants, including	
		37.5	20% of total cover:	15	, ,,,,	
Woody Vine Stratum (Plot size:					herbaceous vines, regardless of size, <u>and</u> woody	
1. None Observed					plants, except woody vines, less than approximately	
2					3 ft (1 m) in height.	
3						
4					Woody vine - All woody vines, regardless of height.	
5						
		0	= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes <u>X</u> No	
Remarks: (if observed, list m	orphological adaptati	ions below).			
A marketing to discretion of books on			/- F00/ - f -lit			
A positive indication of hydrop	onytic vegetation was	observed	(>50% of dominant	species index	ked as UBL, FAUW, or FAU).	
A positive indication of hydrop	phytic vegetation was	observed	(Prevalence Index is	s ≤ 3.00).		

Depth	Matrix			Redox F	eatures			
inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-20	10YR 4/2	80	10YR 4/6	20	С	PL	Sandy Loam	
				_				
				_				
	oncentration, D=Dep		,			² Location: F	PL=Pore Lining, M=Matrix	•
•	s Indicators: (Appl	icable to	•		•			ematic Hydric Soils ³ :
Histoso	` ,				Surface (S8) (L		1 cm Muck (A9)	
Histic E	Epipedon (A2)				e (S9) (LRR S,		2 cm Muck (A10	
	Histic (A3)				neral (F1) (LRR	O)		F18) (outside MLRA 150A
_ · ·	en Sulfide (A4)			Gleyed Ma	` '			olain Soils (F19) (LRR P, S,
	ed Layers (A5)			ed Matrix (F	,			nt Loamy Soils (F20)
_ ·	c Bodies (A6) (LRR I			Dark Surfa	,		(MLRA 153B)	
	lucky Mineral (A7) (L		· — ·	ed Dark Su	` ,		Red Parent Mate	` '
	Presence (A8) (LRR			Depression	` '		 ′	rk Surface (TF12)
	luck (A9) (LRR P, T)			=10) (LRR l	•		Other (Explain in	Remarks)
	ed Below Dark Surfa	ce (A11)		,	F11) (MLRA 15	•	2	
	Dark Surface (A12)			U	Masses (F12) (hydrophytic vegetation and logy must be present,
	Prairie Redox (A16) (=13) (LRR P, T ,	, U)	•	ed or problematic.
	Mucky Mineral (S1)	LRR O, S	· —	•) (MLRA 151)			F
	Gleyed Matrix (S4)			•	F18) (MLRA 15	•		
	Redox (S5)				ain Soils (F19)			
	d Matrix (S6)		Anoma	alous Bright	Loamy Soils (F	F20) (MLRA 1 4	9A, 153C, 153D)	
Dark S	urface (S7) (LRR P,	S, T, U)						
	Layer (if observed)							
Type: Depth (in	nches):					Hydri	c Soil Present? Yes _	X No
Remarks:								
o positive in	dication of hydric soi	l was obse	erved.					

Project/Site:	Bluewater SPM	Co	unty:	Nueces	Sai	mpling Date:	February 5, 2019
Applicant/Owner:	Lloyd Engineer		State			mple Point:	
· · · — — — — — — — — — — — — — — — — —	, , , , , , , , , , , , , , , , , , ,		ection, Township			N/A	
Landform (hillslope, terrace, et		ter Lo	ocal relief (conca	ve, convex, no	ne): Cond	ave Slope	(%): 0-5
Subregion (LRR or MLRA):					·	.080144 D	atum: North American Datum 1983
Soil Map Unit Name:		y loam, rarely flood				cation:	E2USN
Are climatic / hydrologic conditi	ions on the site typical for this t	time of year? (res / No)	YES	_	n in Remarks.)	
Are Vegetation No	,Soil No ,or Hydrology	No significar	ntly disturbed?	Are "Normal C	ircumstances'	'present? Ye	s X No
Are Vegetation No	Soil No or Hydrology	No naturally	problematic?	(If ne	eeded, explair	n any answers ir	n Remarks.)
SUMMARY OF FINDIN	JGS - Attach site man	showing san	nnling noin	locations	transacte	s importan	t features etc
- COMMITTEE OF THE DIS	——————————————————————————————————————	Silowing Sun	inpining point		, transcott		t icutaics, ctc.
Hydrophytic Vegetation Prese		No					
Hydric Soil Present?		No	Is the Sampl	ed Area			
Wetland Hydrology Present?	Yes X	No	within a Wet	land?	Yes	<u>X</u> N	o
Remarks:							
This point was determined	d to be within a wetland due to	the presence of all	3 wetland criter	ia.			
HYDROLOGY							
Wetland hydrology Indic						,	um of two required)
	um of one is required; check al					e Soil Cracks (E	·
X Surface Water (A1)	 -	Aquatic Fauna (B	•				oncave Surface (B8)
High Water Table (A2)	Marl Deposits (B1				ge Patterns (B1	·
Saturation (A3)		Hydrogen Sulfide		Dooto(C2)		Trim Lines (B16)	
Water Marks (B1)	(P2)	Oxidized Rhizosp	-	100is(U3)		eason Water Ta	, ,
Sediment Deposits Drift Deposits (B3)	(B2)	Presence of Redu Recent Iron Redu	, ,	vila (C6)		sh Burrows (C8)	Aerial Imagery (C9)
Algal Mat or Crust ((B4)	Thin Muck Surfac		ilis (CO)		orphic Position (, ,
Iron Deposits (B5)		Other (Explain in				w Aquitard (D3)	, ,
	on Aerial Imagery (B7)	Other (Explain in	ixemarks)			leutral Test (D5)	
Water-Stained Lea	, ,					num moss (D8)	•
Water-Stained Lea	ves (B9)				Орпад	nam moss (Do)	(LIKK 1, 0)
Field Observations:							
Surface Water Present?	Yes X No	Depth (inches):	2				
	Yes NoX	Depth (inches):	>20				
Saturation Present?	Yes NoX	Depth (inches):	>20	Wetland Hyd	Irology Prese	nt? Yes	X No
(includes capillary fringe)							
Describe Recorded Data	(stream gauge, monitoring well	, aerial photos, pre	vious inspection	s), if available:			
Remarks:							
A positive indication of we	atland budgalagu waa abaanyad	(at least one prime	on (indicator)				
A positive indication of we	etland hydrology was observed	(at least one prima	ary indicator).				
Aquatic Fauna: fish.							
Aquatio i auria. IIsri.							

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft.)	% cover	Species?	Status	Number of Dominant Species	
					That Are OBL, FACW, or FAC:1 (A))
2.						
3.					Total Number of Dominant	
4.					Species Across All Strata: 1 (B))
5.						
6.					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC: 100% (A/	/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:					Prevalence Index Worksheet:	
1. None Observed					Total % Cover of: Multiply by:	i
2.					OBL species 100 x 1 = 100	-
3.					FACW species 0 x 2 = 0	-
4.					FAC species 0 x 3 = 0	-
5.					FACU species 0 x 4 = 0	-
6.					UPL species 0 x 5 = 0	-
·-			= Total Cover			- (B)
	50% of total cover:		20% of total cover:	0	(i.i)	- (")
Shrub Stratum (Plot size:			20% of total cover.		Prevalence Index = B/A = 1.00	
4. 4. 4		100	Yes	OBL	1 revalence index = B//(= 1.00	-
				OBL	Hydrophytic Vegetation Indicators:	
2.					1 - Rapid Test for Hydrophytic Vegetation	
3.					X 2 - Dominance Test is >50%	
4					X 3 - Prevalence Index is $\leq 3.0^{1}$	
5					Problematic Hydrophytic Vegetation ¹ (Explain)	
6		400			Froblematic Hydrophytic vegetation (Explain)	
	500/ · f t · t · l · · · · · ·		= Total Cover	20	16. 18. 14. 11. 11. 11. 11. 11. 11. 11. 11. 11	
Hart Otratam (District	50% of total cover:	50	20% of total cover:	20	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30_π)				be present, unless disturbed or problematic.	
					Definitions of Five Vegetation Strata:	
2.					Tree - Woody plants, excluding woody vines,	
3					approximately 20 ft (6m) or more in height and 3 in.	
4					(7.6 cm) or larger in diameter at breast height (DBH).	
5					Conline Woody plants evaluding woody vines	
6					Sapling - Woody plants, excluding woody vines,	
7					approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.	
8					tian 3 iii. (7.0 dii) DBH.	
9					Shrub - Woody plants, excluding woody vines,	
10						
11					approximately 3 to 20 ft (1 to 6 m) in height.	
			= Total Cover		Hards All book on the Control of the	
	50% of total cover:	0	20% of total cover:	0	Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, <u>and</u> woody	
Woody Vine Stratum (Plot size:	30 ft)					
1. None Observed					plants, except woody vines, less than approximately	
2					3 ft (1 m) in height.	
3					Washing Allowabida B. C. C.	
4					Woody vine - All woody vines, regardless of height.	
5						
		0	= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes X No	
Remarks: (if observed, list me	orphological adaptat	ions below).			
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	species index	xed as OBL_FACW_or FAC)	
7 positive indication of flydrop	my no vegetation was	ODSCIVEG	(+ 00 % or dominant	opeoles index	Red as GBE, 1710VV, of 1710).	
A positive indication of hydrop	hytic vegetation was	heerved	(Prevalence Index is	s < 3 NN		
A positive indication of rigurop	my no vegetation was	, Justi veu	(i revalence muex i	o = 0.00j.		

SOIL

Sampling Point: DPB011_PSS

Depth	Matrix			Redox F	eatures			
nches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-20	N 5	95	None	_			Clay	
0-20	N 2.5	5	None	_			Clay	
0 20			.,,,,,,		-			
					-			
					-			
	oncentration, D=Dep					² Location: Pl	L=Pore Lining, M=Matr	
lydric Soils	Indicators: (Appli	icable to all	•		•		Indicators for Prob	lematic Hydric Soils ³ :
Histosol	(A1)		Polyva	lue Below	Surface (S8) (L	.RR S, T, U)	1 cm Muck (A9) (LRR 0)
Histic Ep	pipedon (A2)		Thin Da	ark Surfac	e (S9) (LRR S ,	T, U)	2 cm Muck (A1	0) (LRR S)
Black Hi	istic (A3)		Loamy	Mucky Mir	neral (F1) (LRF	(O)	Reduced Vertic	(F18) (outside MLRA 150A,
 Hydroge	en Sulfide (A4)		X Loamy	Gleyed Ma	atrix (F2)		Piedmont Floor	dplain Soils (F19) (LRR P, S, 1
	d Layers (A5)			ed Matrix (ght Loamy Soils (F20)
	Bodies (A6) (LRR I	P T III		Dark Surfa	•		(MLRA 153B)	grit 20011 (1 20)
_ ·	ucky Mineral (A7) (L				urface (F7)		Red Parent Ma	terial (TE2)
	, , ,							
	resence (A8) (LRR	•		Depressio				ark Surface (TF12)
	ıck (A9) (LRR P, T)			10) (LRR	-		Other (Explain	in Remarks)
	d Below Dark Surfa	ce (A11)			F11) (MLRA 1	-	•	
	ark Surface (A12)			-	Masses (F12)			f hydrophytic vegetation and
Coast Pi	rairie Redox (A16) (MLRA 150A)Umbrid	Surface (I	F13) (LRR P, T	, U)		ology must be present, bed or problematic.
Sandy M	Mucky Mineral (S1) ((LRR O, S)	Delta C	Ochric (F17) (MLRA 151)		uniess distur	bed or problematic.
Sandy G	Gleyed Matrix (S4)		Reduce	ed Vertic (F	=18) (MLRA 15	0A, 150B)		
	Redox (S5)				ain Soils (F19)			
	Matrix (S6)				, ,	-	A, 153C, 153D)	
	rface (S7) (LRR P,	C T II)				_0) (<u>_</u>	,,	
Tunai								
Type: Depth (inc						Hydric	Soil Present? Yes	X No
Depth (inc						Hydric	Soil Present? Yes	X No
Depth (inc						Hydrid	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No

Project/Site:	Bluewater SPM	Co	unty:	Nueces		Sampling Date:	: Februa	ary 5, 2019
Applicant/Owner:	Lloyd Engineer	ing	State	e:	Texas	Sample Point:	DP	B012_U
Investigator(s): C.	Bailey and N	N. Trivino Se	ection, Township	, Range:		N	/A	
Landform (hillslope, terrace, et		Lo	ocal relief (conca	ve, convex, r	none):(Convex Slo	ope (%):	0-5
Subregion (LRR or MLRA):	None		_ Lat:27.86	2052	Long:	-97.079516	Datum: No	orth American Datum 1983
Soil Map Unit Name:		y loam, rarely flood			NWI Clas	ssification:	N/	/A
Are climatic / hydrologic condit	tions on the site typical for this t				_ ` '	olain in Remarks	•	
	,Soil No ,or Hydrology _		-			-		_
Are Vegetation No	,Soil No ,or Hydrology _	No naturally	problematic?	(If	needed, exp	olain any answe	rs in Remarks	s.)
SUMMARY OF FINDIN	NGS - Attach site map	showing san	npling point	location	s, transe	cts, import	tant featu	res, etc.
Hydrophytic Vegetation Prese	ent? Yes X	No						
Hydric Soil Present?	Yes X	No	Is the Sampl	ed Area				
Wetland Hydrology Present?		No X	within a Wet		Yes		No X	(
Remarks:								
This point was determine	d not to be within a watland due	to the look of wet	land budralagu					
This point was determine	d not to be within a wetland due	e to the lack of well	iand nydrology.					
HYDROLOGY								
Wetland hydrology Indi	cators:				Secondar	y Indicators (mi	inimum of two	required)
	num of one is required; check all					face Soil Crack	` ,	
Surface Water (A1	· —	Aquatic Fauna (B	•			arsely Vegetate		urface (B8)
High Water Table (· ·	Marl Deposits (B1				ainage Patterns		
Saturation (A3)		Hydrogen Sulfide		D 4 (00)		ss Trim Lines (F	•	
Water Marks (B1)		Oxidized Rhizospl	_	Roots(C3)		-Season Water		
Sediment Deposits	· · · —	Presence of Redu	, ,	:: - (00)		ayfish Burrows ((CO)
Drift Deposits (B3)		Recent Iron Redu		olis (Cb)		turation Visible		gery (C9)
Algal Mat or Crust	· · —	Thin Muck Surface				omorphic Positi		
Iron Deposits (B5)		Other (Explain in I	Remarks)			allow Aquitard(•	
	on Aerial Imagery (B7)					C-Neutral Test		
Water-Stained Lea	ves (B9)				Sp	hagnum moss (D8) (LKK 1, 1	U)
Field Observations:								
	Yes No X	Depth (inches):	N/A					
	Yes No X	Depth (inches):						
	Yes No X	Depth (inches):		Wetland Hy	ydrology Pr	esent? Yes	N	o X
(includes capillary fringe)		. , ,		•	. 0,			
Describe Recorded Data	(stream gauge, monitoring well,	, aerial photos, pre	vious inspection	s), if availabl	e:			
Remarks:								
No positive indication of v	wetland hydrology was observed	d.						

					I Banda and Tarkanada kark	
		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft.)	% cover	Species?	Status	Number of Dominant Species	
1. None Observed					That Are OBL, FACW, or FAC: 3	(A)
2.			· <u></u>			
					Total Number of Dominant	
3			· —			(D)
4			· —		Species Across All Strata: 3	(B)
5						
6			. <u> </u>		Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC: 100%	(A/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:			. = • · · · · · · · · · · · · · · · · · ·		Prevalence Index Worksheet:	
					Table O. Orange f	
1. None Observed					Total % Cover of: Multiply by:	
2			<u> </u>		OBL species 35 x 1 = 35	
3			. <u> </u>		FACW species 10 x 2 = 20	
4					FAC species 30 x 3 = 90	
5.					FACU species 0 x 4 = 0	
6.					UPL species 0 x 5 = 0	
0			= Total Cover			
	500 / 5 : : :		•	-	Column Totals: (A)145	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = 1.93	
1. None Observed					Undrankutia Vanatatian Indiastara	
2.					Hydrophytic Vegetation Indicators:	
3					1 - Rapid Test for Hydrophytic Vegetation	
4			<u> </u>		X 2 - Dominance Test is >50%	
5					X 3 - Prevalence Index is ≤ 3.0 ¹	
6.					Problematic Hydrophytic Vegetation ¹ (Explain))
			= Total Cover			
	EOO/ of total covers		•	0	1 Indicators of budge soil and watland budgelegy must	
	50% of total cover:		20% of total cover:	0	'Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
1. Tridens albescens		30	Yes	FAC	Definitions of Five Vegetation Strata:	
2. Borrichia frutescens		20	Yes	OBL	Tree - Woody plants, excluding woody vines,	
3. Distichlis littoralis		15	Yes	OBL	approximately 20 ft (6m) or more in height and 3 in.	
4. Lycium carolinianum		10	No	FACW	(7.6 cm) or larger in diameter at breast height (DBH).	
5.						
					Sapling - Woody plants, excluding woody vines,	
6					approximately 20 ft (6 m) or more in height and less	
7						
8			<u> </u>		than 3 in. (7.6 cm) DBH.	
9						
10.					Shrub - Woody plants, excluding woody vines,	
11.					approximately 3 to 20 ft (1 to 6 m) in height.	
		75			, , ,	
	500 / 5 : : :	75	= Total Cover	4-	Herb - All herbaceous (non-woody) plants, including	
	50% of total cover:	37.5	20% of total cover:	15	, ,,,	
Woody Vine Stratum (Plot size	:30 ft)				herbaceous vines, regardless of size, <u>and</u> woody	
1. None Observed					plants, except woody vines, less than approximately	
2.					3 ft (1 m) in height.	
3.						
4					Woody vine - All woody vines, regardless of height.	
4						
5			<u> </u>			
		0	= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes X No	
Remarks: (if observed, list m	orphological adaptati	ons below)		1	
rtemarks. (ii observed, list ii	iorpriological adaptati	ons below).			
A positive indication of hydro	phytic vegetation was	observed	(>50% of dominant	species index	xed as OBL, FACW, or FAC).	
A positive indication of hydro	phytic vegetation was	observed	(Prevalence Index is	s ≤ 3.00).		
	· -		•	,		

Histic Epipedon (A2) Thin Black Histic (A3) Loan Hydrogen Sulfide (A4) Loan	otherwise noted.) value Below Surface (S8) (LRR	Loc² PL PL PL	Texture Sandy Loam	Remarks		
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, lydric Soils Indicators: (Applicable to all LRRs, unless of the listosol (A1) Polyou Thin Histic Epipedon (A2) Thin Black Histic (A3) Loan Hydrogen Sulfide (A4) Loan	MS=Masked Sand Grains. otherwise noted.) value Below Surface (S8) (LRF		Sandy Loam			
Histosol (A1) Polya Histic Epipedon (A2) Thin Black Histic (A3) Loan Hydrogen Sulfide (A4)	otherwise noted.) value Below Surface (S8) (LRR	² Location: PL				
Histosol (A1) Polya Histic Epipedon (A2) Thin Black Histic (A3) Loan Hydrogen Sulfide (A4)	otherwise noted.) value Below Surface (S8) (LRR	² Location: PL				
Histosol (A1) Polya Histic Epipedon (A2) Thin Black Histic (A3) Loan Hydrogen Sulfide (A4) Loan	otherwise noted.) value Below Surface (S8) (LRR	² Location: PL				
Histosol (A1) Polya Histic Epipedon (A2) Loan Hydrogen Sulfide (A4) Loan Loan Loan	otherwise noted.) value Below Surface (S8) (LRR	² Location: PL				
Histosol (A1) Polya Histic Epipedon (A2) Loan Hydrogen Sulfide (A4) Loan Loan Loan	otherwise noted.) value Below Surface (S8) (LRR	² Location: PL				
Histosol (A1) Polya Histic Epipedon (A2) Thin Black Histic (A3) Loan Hydrogen Sulfide (A4) Loan	otherwise noted.) value Below Surface (S8) (LRR	² Location: PL				
Histosol (A1) Polya Histic Epipedon (A2) Thin Black Histic (A3) Loan Hydrogen Sulfide (A4) Loan	otherwise noted.) value Below Surface (S8) (LRR	Location: PL				
Histosol (A1) Polyv Histic Epipedon (A2) Thin Black Histic (A3) Loan Hydrogen Sulfide (A4) Loan	value Below Surface (S8) (LRF		=Pore Lining, M=Matri	x. ematic Hydric Soils ³ :		
Histic Epipedon (A2) Thin Black Histic (A3) Loan Hydrogen Sulfide (A4) Loan	` , `) T II)	1 cm Muck (A9)	•		
Black Histic (A3) Loan Hydrogen Sulfide (A4) Loan	Dark Surface (SO) /I DD C T		2 cm Muck (A9)			
Hydrogen Sulfide (A4) Loan	Dark Surface (S9) (LRR S, T, ny Mucky Mineral (F1) (LRR O	-		(F18) (outside MLRA 150A ,		
<u> </u>	ny Gleyed Matrix (F2)	1		plain Soils (F19) (LRR P, S,		
Stratified Layers (A5) Deple	eted Matrix (F3)			ht Loamy Soils (F20)		
	ox Dark Surface (F6)		(MLRA 153B)	Tit Loanly Jolis (1 20)		
	eted Dark Surface (F7)		Red Parent Mate	erial (TF2)		
<u> </u>	ox Depressions (F8)			ark Surface (TF12)		
<u> </u>	(F10) (LRR U)		Other (Explain in	, ,		
	eted Ochric (F11) (MLRA 151)		Other (Explain ii	Tromano,		
<u> </u>	Manganese Masses (F12) (LR		³ Indicators of	hydrophytic vegetation and		
` '	ric Surface (F13) (LRR P, T, U		wetland hydrology must be present,			
	Ochric (F17) (MLRA 151)	,	unless disturb	ped or problematic.		
<u> </u>	iced Vertic (F18) (MLRA 150A	, 150B)				
<u> </u>	mont Floodplain Soils (F19) (M	•				
<u> </u>	nalous Bright Loamy Soils (F20	•	A, 153C, 153D)			
Dark Surface (S7) (LRR P, S, T, U)						
Restrictive Layer (if observed):						
Туре:						
Depth (inches):		Hydric	Soil Present? Yes _	X No		
Remarks:						
A positive indication of hydric soil was observed.						

Project/Site:	Bluewater SPM	Count	ty: Nuece	s Sampl	ing Date: F	ebruary 5, 2019
Applicant/Owner:	Lloyd Engineer	ing	State:	Texas Samp	le Point:	DPB013_PSS
Investigator(s):	C. Bailey and 1	N. Trivino Secti	on, Township, Range:		N/A	
Landform (hillslope, terrace, e	etc.): Marsh, Saltwa	ter Local	I relief (concave, convex	k, none): Concave	Slope (%)	. 0-5
Subregion (LRR or MLRA):	None	L	.at: <u>27.862055</u>	Long:97.079	9616 Datun	1: North American Datum 1983
Soil Map Unit Name:	ljam cla	y loam, rarely flooded		NWI Classificati	on:	E2USN
Are climatic / hydrologic cond	itions on the site typical for this t		s / No) YES		,	
	_,Soil No ,or Hydrology _		disturbed? Are "Norm	•		
Are Vegetation No	_,Soil No ,or Hydrology _	No naturally pro	oblematic?	(If needed, explain ar	ny answers in Re	marks.)
SUMMARY OF FINDI	NGS - Attach site map	showing samp	ling point location	ons, transects, i	important fe	eatures, etc.
						1
Hydrophytic Vegetation Pres	sent? Yes X	No				
Hydric Soil Present?			Is the Sampled Area			
Wetland Hydrology Present			within a Wetland?	Yes X	No	
, 0,						
Remarks:						
This point was determine	ed to be within a wetland due to	the presence of all 3 y	wetland criteria			
This point was determine	to be within a welland due to	the presence of all 5	wetiand chiena.			
HYDROLOGY	liantora					
Wetland hydrology Ind				Secondary Indic	•	of two required)
	num of one is required; check al				oil Cracks (B6)	O f (D0)
X Surface Water (A	· —	Aquatic Fauna (B13)			-	ave Surface (B8)
High Water Table	• •	Marl Deposits (B15)			Patterns (B10)	
Saturation (A3) Water Marks (B1)		Hydrogen Sulfide Oc	res on Living Roots(C3)		n Lines (B16) on Water Table (·C3)
Sediment Deposit		Presence of Reduce	- , ,		Burrows (C8)	(02)
Drift Deposits (B3)	· · · —		on in Tilled Soils (C6)		n Visible on Aeria	al Imagery (C9)
Algal Mat or Crust	· —	Thin Muck Surface (, ,		nic Position (D2)	, ,
Iron Deposits (B5)	· · —	Other (Explain in Re	•		quitard (D3)	
	on Aerial Imagery (B7)	Other (Explain in the	markoj	X FAC-Neut		
Water-Stained Le					n moss (D8) (LR	RT U)
	2700 (20)					
Field Observations:						
Surface Water Present?	Yes X No	Depth (inches):	2			
Water Table Present?	Yes No X	Depth (inches):	>20			
Saturation Present?	Yes NoX	Depth (inches):	>20 Wetland	Hydrology Present?	Yes X	No
(includes capillary fringe)						
Describe Recorded Data	a (stream gauge, monitoring well	, aerial photos, previo	ous inspections), if availa	able:		
Remarks:						
A positive indication of w	vetland hydrology was observed	(at least one primary	indicator)			
A positive indication of w	elianu nyurology was observeu	(at least one primary	mulcator).			
Aquatic Fauna: fish.						
Aquatio I auria. IISII.						

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft.)	% cover	Species?	Status	Number of Dominant Species	
					That Are OBL, FACW, or FAC:1 (A))
2.						
3.					Total Number of Dominant	
4.					Species Across All Strata: 1 (B))
5.						
6.					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC: 100% (A/	/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:					Prevalence Index Worksheet:	
1. None Observed					Total % Cover of: Multiply by:	i
2.					OBL species 100 x 1 = 100	-
3.					FACW species 0 x 2 = 0	-
4.					FAC species 0 x 3 = 0	-
5.					FACU species 0 x 4 = 0	-
6.					UPL species 0 x 5 = 0	-
·-			= Total Cover			- (B)
	50% of total cover:		20% of total cover:	0	(i.i)	- (")
Shrub Stratum (Plot size:			20% of total cover.		Prevalence Index = B/A = 1.00	
4. 4. 4		100	Yes	OBL	1 revalence index = B//(= 1.00	-
				OBL	Hydrophytic Vegetation Indicators:	
2.					1 - Rapid Test for Hydrophytic Vegetation	
3.					X 2 - Dominance Test is >50%	
4					X 3 - Prevalence Index is $\leq 3.0^{1}$	
5					Problematic Hydrophytic Vegetation ¹ (Explain)	
6		400			Froblematic Hydrophytic vegetation (Explain)	
	500/ · f t · t · l · · · · · ·		= Total Cover	20	16. 18. 14. 11. 11. 11. 11. 11. 11. 11. 11. 11	
Hart Otratam (District	50% of total cover:	50	20% of total cover:	20	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30_π)				be present, unless disturbed or problematic.	
					Definitions of Five Vegetation Strata:	
2.					Tree - Woody plants, excluding woody vines,	
3					approximately 20 ft (6m) or more in height and 3 in.	
4					(7.6 cm) or larger in diameter at breast height (DBH).	
5					Conline Woody plants evaluding woody vines	
6					Sapling - Woody plants, excluding woody vines,	
7					approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.	
8					tian 3 iii. (7.0 dii) DBH.	
9					Shrub - Woody plants, excluding woody vines,	
10						
11					approximately 3 to 20 ft (1 to 6 m) in height.	
			= Total Cover		Hards All book on the Control of the	
	50% of total cover:	0	20% of total cover:	0	Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, <u>and</u> woody	
Woody Vine Stratum (Plot size:	30 ft)					
1. None Observed					plants, except woody vines, less than approximately	
2					3 ft (1 m) in height.	
3					Washing Allowabida B. C. C.	
4					Woody vine - All woody vines, regardless of height.	
5						
		0	= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes X No	
Remarks: (if observed, list me	orphological adaptat	ions below).			
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	species index	xed as OBL_FACW_or FAC)	
7 positive indication of flydrop	my no vegetation was	ODSCIVEG	(+ 00 % or dominant	opeoles index	Red as GBE, 1710VV, of 1710).	
A positive indication of hydrop	hytic vegetation was	heerved	(Prevalence Index is	s < 3 NN		
A positive indication of rigurop	my no vegetation was	, Justi veu	(i revalence muex i	o = 0.00j.		

	cription: (Describe Matrix	to the depth	i needed to doc		eatures	ommin the abse	ence of indicators.)	
Depth inches)	Color (moist)	 -	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-20	N 5	95	None				Clay	romano
0-20	N 2.5	5	None	_			Clay	
0 20		<u> </u>	110110			-	<u> </u>	
						-		
	oncontration D-Dor		laduaad Matrix N		d Sand Crains	2l postion: DI		
	oncentration, D=Deps Indicators: (Appl					Location. Pt	L=Pore Lining, M=Mate	olematic Hydric Soils ³ :
•		icable to all i	•		•	DD C T III		
Histoso	, ,				Surface (S8) (L		1 cm Muck (A9	
	Epipedon (A2)				e (S9) (LRR S ,		2 cm Muck (A1	
	Histic (A3)			-	neral (F1) (LRR	(0)		(F18) (outside MLRA 150A
	en Sulfide (A4)		_X_Loamy	-	, ,			dplain Soils (F19) (LRR P, S,
	ed Layers (A5)			ed Matrix (•			ght Loamy Soils (F20)
	Bodies (A6) (LRR			Dark Surfa			(MLRA 153B)	
	lucky Mineral (A7) (L			ed Dark Su			Red Parent Ma	
	Presence (A8) (LRR	•		Depressio				Oark Surface (TF12)
	luck (A9) (LRR P, T)			10) (LRR I	-		Other (Explain	in Remarks)
	ed Below Dark Surfa	ce (A11)		•	(F11) (MLRA 1	•	3	
	Oark Surface (A12)			-	Masses (F12)			f hydrophytic vegetation and
Coast F	Prairie Redox (A16) ((MLRA 150A)	Umbrid	: Surface (l	F13) (LRR P, T	', U)		rology must be present, bed or problematic.
Sandy	Mucky Mineral (S1)	(LRR O, S)	Delta (Ochric (F17	") (MLRA 151)		arnoco diotar	bod of problematic.
Sandy	Gleyed Matrix (S4)		Reduc	ed Vertic (F	-18) (MLRA 15	i0A, 150B)		
Sandy	Redox (S5)		Piedm	ont Floodpl	ain Soils (F19)	(MLRA 149A)		
Strippe	d Matrix (S6)		Anoma	alous Bright	t Loamy Soils (l	F20) (MLRA 149	9A, 153C, 153D)	
Type: Depth (in						Hydric	Soil Present? Yes	X No
	,							
emarks:						•		
positive in	dication of hydric soi	il was observe	ed.					

Project/Site:	F	Bluewater SPM		County:	Nueces	Sampling	Date: Fe	ebruary 5, 2019
Applicant/Owner:		Lloyd Engi	neering	Sta			Point:	•
Investigator(s):		and _		Section, Townshi		·	N/A	
Landform (hillslope, ter				Local relief (conc	ave, convex, no	ne): Convex	Slope (%):	0-5
Subregion (LRR or MLI			e	Lat: 27.8	361043 Lo	ong: -97.07960	1 Datum	: North American Datum 1983
Soil Map Unit Name:		ljan		flooded		NWI Classification:		N/A
Are climatic / hydrologic	conditions on	the site typical for t	his time of year?	(Yes / No)	YES	(if no, explain in Re	marks.)	
Are Vegetation	No,Soil	No ,or Hydroloς	gy No signi	ficantly disturbed?	Are "Normal C	ircumstances" prese	nt? Yes	X No
Are Vegetation	No,Soil	No ,or Hydrolog	gy <u>No</u> natur	rally problematic?	(If ne	eeded, explain any a	inswers in Ren	narks.)
SUMMARY OF F	INDINGS -	Attach site m	ap showing s	sampling poir	nt locations	, transects, im	portant fe	atures, etc.
				1		•	<u> </u>	
Hydrophytic Vegetation	n Present?	Vec	NoX					
Hydric Soil Present?	II Fleseit!	Yes Yes	No X No X		alad Araa			
Wetland Hydrology Pr	resent?	Yes	No X	within a We		Yes	No	Y
vvetiana riyarology ri	esent:	163	No	Within a We	rtiana :	163	- "	
Remarks:								
This point was det	tarminad not to	he within a watlanc	l due to the leek of	all three watland a	ritorio			
I his point was det	ermined not to	be within a wetland	I due to the lack of	all three wetland c	riteria.			
HYDROLOGY								
Wetland hydrolo	gy Indicators:					Secondary Indicato	rs (minimum o	f two required)
Primary Indicators	(minimum of o	ne is required; chec	ck all that apply)			Surface Soil	Cracks (B6)	
Surface Wa	ter (A1)	_	Aquatic Fauna	a (B13)			-	ve Surface (B8)
High Water	Table (A2)	_	Marl Deposits	s (B15) (LRR U)		Drainage Pat	terns (B10)	
Saturation (A3)	_	Hydrogen Sul	lfide Odor (C1)		Moss Trim Li	nes (B16)	
Water Mark	s (B1)	_	Oxidized Rhiz	ospheres on Living	Roots(C3)	Dry-Season	Water Table (0	C2)
Sediment D	eposits (B2)	_	Presence of F	Reduced Iron (C4)		Crayfish Burr	ows (C8)	
Drift Deposi	ts (B3)		Recent Iron R	Reduction in Tilled S	Soils (C6)	Saturation Vi	sible on Aerial	Imagery (C9)
Algal Mat o	· Crust (B4)		Thin Muck Su	ırface (C7)		Geomorphic	Position (D2)	
Iron Deposi	ts (B5)	_	— Other (Explair	n in Remarks)		Shallow Aqui	tard (D3)	
	√isible on Aeria	ıl Imagery (B7)				FAC-Neutral	Test (D5)	
	ed Leaves (B9						noss (D8) (LRF	R T, U)
Field Observations:								
Surface Water Preser			Depth (inch	es): N/A				
Water Table Present?	Yes	NoX	Depth (inch	es): >20				
Saturation Present?	Yes	NoX	Depth (inch	es): <u>>20</u>	Wetland Hyd	rology Present?	Yes	NoX
(includes capillary frin	 							
Describe Recorde	d Data (stream	gauge, monitoring	well, aerial photos,	, previous inspectio	ns), if available:			
Remarks:								
Remarks:								ļ
No positive indica	ion of wetland	hydrology was obse	erved.					
The positive interest		, a. o.ogyao ozot						

		A la a a la 14 a	Danninant	lu di a atau	Dominance Test worksheet:	
T 01 1 (D1 1)	00 %	Absolute	Dominant	Indicator		
Tree Stratum (Plot size:	<u>30 ft.</u>)	% cover	Species?	Status	Number of Dominant Species	
					That Are OBL, FACW, or FAC:1	A)
2						
3					Total Number of Dominant	
4			. <u> </u>		Species Across All Strata: 2 (E	B)
5						
6					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC: 50%	A/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)		•		Prevalence Index Worksheet:	
1. None Observed	,				Total % Cover of: Multiply by:	
	_				OBL species 40 x 1 = 40	_
2					FACW species 0 x 2 = 0	_
3.						_
4						_
5					FACU species 20 x 4 = 80	_
6					UPL species 40 x 5 = 200	—
			= Total Cover		Column Totals: (A) 320	(B)
		0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = 3.20	_
1. None Observed						
2					Hydrophytic Vegetation Indicators:	
3					1 - Rapid Test for Hydrophytic Vegetation	
4					2 - Dominance Test is >50%	
5					3 - Prevalence Index is ≤ 3.0 ¹	
6					Problematic Hydrophytic Vegetation ¹ (Explain)	
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)		•		be present, unless disturbed or problematic.	
1. Eleocharis palustris		40	Yes	OBL	Definitions of Five Vegetation Strata:	
Prosopis glandulosa		5	No	UPL	Tree - Woody plants, excluding woody vines,	
3. Galium aparine		10	No	FACU	approximately 20 ft (6m) or more in height and 3 in.	
Heterotheca subaxillaris		15	No	UPL	(7.6 cm) or larger in diameter at breast height (DBH).	
5. Schizachyrium scoparium		10	No	FACU	(7.0 only of larger in diameter at breast fleight (BBH).	
6. Bothriochloa ischaemum		20	Yes	UPL	Sapling - Woody plants, excluding woody vines,	
				UPL	approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8					than 6 m. (1.6 cm) BBH.	
9					Shrub - Woody plants, excluding woody vines,	
10			·		approximately 3 to 20 ft (1 to 6 m) in height.	
11			· _ 		approximately 5 to 20 ft (1 to 0 fil) lift fielyfit.	
		100	= Total Cover		Haub All barbacous (par weeds) starts in the Paris	
	50% of total cover:	50	20% of total cover:	20	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:	30 ft)				herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2					3 ft (1 m) in height.	
3			<u> </u>			
4					Woody vine - All woody vines, regardless of height.	
5						
		0	= Total Cover		Hydrophytic	· <u></u>
	50% of total cover:	0	20% of total cover:	0	Vegetation	
			•		Present? Yes No X	
Remarks: (if observed, list me	orphological adaptati	ons below).		•	
•						
No positive indication of hydro	pnytic vegetation wa	as observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).	

Depth	Matrix			Redox F	eatures						
inches)	Color (moist)	%	Color (moist)	%_	Type ¹	Loc ²	Texture	Remarks			
0-5	10YR 4/3	_99_	10YR 4/6	_1_	C	M	Sandy Clay Loam Shovel Restriction				
	Concentration, D=Deps Indicators: (Appl					² Location: P	L=Pore Lining, M=N	Matrix.			
Histos	`		•		Surface (S8) (L I	RR S, T, U)		(A9) (LRR O)			
	Epipedon (A2)			Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S)							
	Histic (A3)	c (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18									
	gen Sulfide (A4)			Loamy Gleyed Matrix (F2) Piedmont Floodplain So							
	ed Layers (A5)		Depleted Matrix (F3) Anomalous Bright Loamy Soi								
— Organi	c Bodies (A6) (LRR	P, T, U)	Redox Dark Surface (F6) (MLRA 153B)								
	lucky Mineral (A7) (L			Depleted Dark Surface (F7)				, Material (TF2)			
— Muck F	Presence (A8) (LRR	U)	Redox	Depression	ns (F8)		Very Shallov	Very Shallow Dark Surface (TF12)			
	fuck (A9) (LRR P, T)		Marl (F	10) (LRR I	J) É		Other (Explain in Remarks)				
— Deplet	ed Below Dark Surfa	ce (A11)	Deplete	ed Ochric (F11) (MLRA 15	1)		,			
	Dark Surface (A12)	, ,		•	Masses (F12) (•	³ Indicator	s of hydrophytic vegetation and			
— Coast	Prairie Redox (A16)	(MLRA 15	OA) Umbrio	Surface (F	13) (LRR P, T ,	U)		ydrology must be present,			
	Mucky Mineral (S1)			•) (MLRA 151)	•	unless dis	sturbed or problematic.			
 Sandv	Gleyed Matrix (S4)		Reduce	ed Vertic (F	18) (MLRA 15 0	A, 150B)					
	Redox (S5)		Piedmo	nt Floodpl	ain Soils (F19) (MLRA 149A)					
	ed Matrix (S6)		Anoma	lous Bright	Loamy Soils (F	20) (MLRA 14	9A, 153C, 153D)				
	surface (S7) (LRR P,	S, T, U)			, ,	, ,	,				
Restrictive	Layer (if observed)	:									
Type:	Gravel										
Depth (ir	nches): 5					Hydri	c Soil Present? You	es NoX			

No positive indication of hydric soils was observed.

Project/Site:	Bluewater SPM	Coun	ty: Nuec	es	Sampling Date:	February 5, 2019
Applicant/Owner:	Lloyd Engineeri	ing	State:	Texas	Sample Point:	DPB015_PSS
Investigator(s): C.	Bailey and N	I. Trivino Secti	on, Township, Range:		N/A	
Landform (hillslope, terrace, et	tc.):Marsh, Saltwat	ter Loca	l relief (concave, conve	ex, none):(Concave Slope (%): 0-5
Subregion (LRR or MLRA):	None	L	.at: <u>27.861135</u>	_ Long:	-97.079618 Da	tum: North American Datum 1983
Soil Map Unit Name:	ljam clay	y loam, rarely flooded			ssification:	N/A
Are climatic / hydrologic condit	tions on the site typical for this ti		s / No) YES		plain in Remarks.)	
Are Vegetation No			disturbed? Are "Nor		· ·	
Are Vegetation No	,Soil No ,or Hydrology _	No naturally pr	oblematic?	(If needed, ex	plain any answers in	Remarks.)
SUMMARY OF FINDIN	NGS - Attach site map	showing samp	ling point locati	ions, transe	ects, important	features, etc.
Hydrophytic Vegetation Prese	ent? Yes X	No				
Hydric Soil Present?		No No	Is the Sampled Area			
Wetland Hydrology Present?			within a Wetland?	Yes	s X No	
Trousing Hydrology Hydrolic					<u> </u>	
Remarks:		•				
This point was determined	d to be within a wetland due to t	the presence of all 3	wetland criteria.			
HADBOI OCA						
HYDROLOGY Wetland hydrology Indi	cators:			C	muladioatora (minima	um of two required)
		that apply)		· · · · · · · · · · · · · · · · · · ·	ry Indicators (minimu	
X Surface Water (A1	um of one is required; check all	Aquatic Fauna (B13	١		ırface Soil Cracks (B parsely Vegetated Co	·
High Water Table (· —	Marl Deposits (B15)	•		ainage Patterns (B10	, ,
Saturation (A3)	· · —	Hydrogen Sulfide Od			oss Trim Lines (B16)	•
Water Marks (B1)		· -	res on Living Roots(C3		y-Season Water Tab	
Sediment Deposits		Presence of Reduce	- ,		ayfish Burrows (C8)	NC (OZ)
Drift Deposits (B3)	· · · —		on in Tilled Soils (C6)		aturation Visible on A	erial Imagery (C9)
Algal Mat or Crust		Thin Muck Surface (, ,		eomorphic Position ([
Iron Deposits (B5)	· · —	Other (Explain in Re			nallow Aquitard (D3)	52)
	on Aerial Imagery (B7)	Other (Explain in Ne	marks)		AC-Neutral Test (D5)	
Water-Stained Lea	= - , ,				phagnum moss (D8) (I RR T III
Water Starred Est	VOO (20)			<u> </u>	magnam mood (20) ((2.a.t 1, 0)
Field Observations:						
Surface Water Present?	Yes X No	Depth (inches):	2			
Water Table Present?	Yes No X	Depth (inches):	>20			
Saturation Present?	Yes NoX	Depth (inches):	>20 Wetland	d Hydrology Pi	resent? Yes	X No
(includes capillary fringe)						
Describe Recorded Data	(stream gauge, monitoring well,	aerial photos, previo	ous inspections), if avai	ilable:		
Remarks:						
A positive indication of we	etland hydrology was observed ((at least one primary	indicator).			
Aquatic Fauna: fish.						

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft)	% cover	Species?	Status	Number of Dominant Species	
4 44 64 4		_/0 COVEI	<u>Species :</u>	Status	·	,
					That Are OBL, FACW, or FAC: 1 (A	.)
2						
3			. <u> </u>		Total Number of Dominant	
4			<u> </u>		Species Across All Strata: 1 (B)
5						
6			. <u> </u>		Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC: 100% (A	/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1 Nana Observed					Total % Cover of: Multiply by:	i
			-			-
2.			·		OBL species x 1 = 100	-
3					FACW species 0	-
4					FAC species 0 x 3 = 0	-
5					FACU species 0 x 4 = 0	_
6			<u> </u>		UPL species 0 x 5 = 0	_
		0	= Total Cover		Column Totals:100(A)100	_ (B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:					Prevalence Index = B/A = 1.00	
		100	Yes	OBL		-
				OBL	Hydronbytic Vegetation Indicators:	
2					Hydrophytic Vegetation Indicators:	
3			· —		1 - Rapid Test for Hydrophytic Vegetation	
4			<u> </u>		X 2 - Dominance Test is >50%	
5					X 3 - Prevalence Index is ≤ 3.0 ¹	
6					Problematic Hydrophytic Vegetation ¹ (Explain)	
		100	= Total Cover			
	50% of total cover:	50	20% of total cover:	20	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:			. 2070 01 10101 00101.		be present, unless disturbed or problematic.	
	·				•	
					Definitions of Five Vegetation Strata:	
2			·		Tree - Woody plants, excluding woody vines,	
3				-	approximately 20 ft (6m) or more in height and 3 in.	
4					(7.6 cm) or larger in diameter at breast height (DBH).	
5						
6					Sapling - Woody plants, excluding woody vines,	
7.					approximately 20 ft (6 m) or more in height and less	
8.					than 3 in. (7.6 cm) DBH.	
9			· -		Shrub - Woody plants, excluding woody vines,	
10					approximately 3 to 20 ft (1 to 6 m) in height.	
11					approximately 3 to 20 ft (1 to 0 fil) in height.	
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:	30 ft.)				herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2.					3 ft (1 m) in height.	
			<u> </u>			
3					Woody vine - All woody vines, regardless of height.	
4			·		Tion of the state	
5						
		0	= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes X No	
Remarks: (if observed, list mo	ornhological adaptat	ions helow)		-	
remarks. (ii observed, list lik	orpriological adaptat	ions below).			
A positive indication of hydrop	hytic vegetation was	s observed	(>50% of dominant	species index	ked as OBL, FACW, or FAC).	
A positive indication of hydrop	hytic vegetation was	s observed	(Prevalence Index is	s ≤ 3.00)		
pessare maisation of mydrop	, ogo.cation wat	_ 02001 VOU	,	0.00/.		

	cription: (Describe Matrix	to the depth n	eeded to doc		indicator or of eatures	confirm the abs	ence of indicators.)		
Depth (inches)	Color (moist)		olor (moist)	%	Type ¹	Loc ²	Texture	Remarks	
					туре			Remarks	
0-20	N 5	95	None	_			Clay		
0-20	N 2.5	5	None				Clay		
Type: C=C	oncentration, D=Dep	oletion, RM=Red	luced Matrix, N	MS=Maske	d Sand Grains.	² Location: P	L=Pore Lining, M=Mat	rix.	
lydric Soils	s Indicators: (Appl	icable to all LR	Rs, unless of	therwise n	oted.)		Indicators for Prob	olematic Hydric Soils ³ :	
Histosol (A1)			Polyvalue Below Surface (S8) (LRR S, T				1 cm Muck (A9	9) (LRR O)	
Histic E	pipedon (A2)		Thin Dark Surface (S9) (LRR S, T, U)				2 cm Muck (A10) (LRR S)		
Black H	listic (A3)		Loamy	Mucky Mir	neral (F1) (LRF	R O)	Reduced Vertic (F18) (outside MLRA 150A,B		
Hydrog	en Sulfide (A4)		X Loamy Gleyed Matrix (F2)				Piedmont Floodplain Soils (F19) (LRR P, S, T)		
Stratifie	ed Layers (A5)		Depleted Matrix (F3)				Anomalous Bright Loamy Soils (F20)		
— Organio	Bodies (A6) (LRR	P, T, U)	Redox Dark Surface (F6)				(MLRA 153B)		
	ucky Mineral (A7) (L	•		ed Dark Su			Red Parent Material (TF2)		
Muck Presence (A8) (LRR U)			Redox Depressions (F8)				Very Shallow Dark Surface (TF12)		
	uck (A9) (LRR P, T)	•		=10) (LRR			Other (Explain in Remarks)		
	ed Below Dark Surfa				-, F11) (MLRA 1	51)		,	
	Park Surface (A12)	(, , , ,		•	Masses (F12)	•	³ Indicators o	f hydrophytic vegetation and	
	Prairie Redox (A16) ((MI RA 150A)		-	F13) (LRR P, 1		wetland hydrology must be present,		
	Mucky Mineral (S1)	-		,	') (MLRA 151)	•	unless disturbed or problematic.		
	. ,	(LIKIK O, O)		•	7 (MLRA 131) =18) (MLRA 18				
	Gleyed Matrix (S4)			•	, .	•			
	Redox (S5)			-	, ,	(MLRA 149A)	A 4500 450D)		
	d Matrix (S6)		Anoma	alous Bright	Loamy Solls (F20) (NILKA 14	9A, 153C, 153D)		
Dark St	urface (S7) (LRR P,	3, 1, 0)							
estrictive l	Layer (if observed)	:							
Type:	•								
Depth (in							Soil Procent? Voc	X No	
Deptii (iii						liyand	Jon Fresent: Tes		
emarks:									
		9							
positive in	dication of hydric soi	il was observed.							

Project/Site:	Bluewater SPM	C	County:	Nueces	Sampling	ı Date: Fe	ebruary 5, 2019
· —	Lloyd Enginee		Stat			Point:	
			Section, Township	o, Range:	·	N/A	
Landform (hillslope, terrace,			Local relief (conca	· · —	one): Convex	Slope (%):	0-5
Subregion (LRR or MLRA):					·		North American Datum 1983
Soil Map Unit Name:		y loam, rarely flo			NWI Classification		E2USP
Are climatic / hydrologic cond	ditions on the site typical for this	time of year?					
Are Vegetation No	_,Soil No ,or Hydrology	No signific	antly disturbed?	Are "Normal (Circumstances" prese	ent? Yes	X No
Are Vegetation No	,Soil No ,or Hydrology	No natural	lly problematic?	(If r	needed, explain any a	answers in Ren	narks.)
SUMMARY OF FIND	INGS - Attach site map	showing sa	mnling noin	t locations	transacts im	nortant for	aturas atc
	- Attach Site map	Silowing 30	inipinig poin		, transcots, iii	portunt rec	
Hydrophytic Vegetation Pre		NoX					
Hydric Soil Present?	Yes <u>X</u>	No	Is the Samp	led Area			
Wetland Hydrology Present	? Yes <u>X</u>	No	within a Wet	tland?	Yes	_ No	X
Remarks:							
·	ned not to be within a wetland du	e to the lack of hy	ydrophytic vegetat	ion.			
HYDROLOGY Wetland hydrology Inc	dicatore:						
					Secondary Indicate	`	two required)
	imum of one is required; check a		(D.10)		Surface Soil		0 ((D0)
Surface Water (A		Aquatic Fauna (Sparsely Vegetated Concave Surface (B8)		
X High Water Table Saturation (A3)	e (A2)	Marl Deposits (E Hydrogen Sulfid			Drainage Patterns (B10) Moss Trim Lines (B16)		
Water Marks (B1			spheres on Living	Poots(C2)		mes (вто) Water Table (С	22)
Sediment Deposi		Presence of Re	· -	Roots(C3)		,	,2)
Drift Deposits (B3	· · · —		duction in Tilled S	oils (C6)		isible on Aerial	Imagery (C0)
Algal Mat or Crus	· —	Thin Muck Surfa		5113 (00)		Position (D2)	inagery (09)
Iron Deposits (B5		Other (Explain i	, ,		Shallow Aqu		
	e on Aerial Imagery (B7)	Other (Explain)	ii Kemanoj		FAC-Neutral	, ,	
Water-Stained Le						noss (D8) (LRF	2 T U)
	54.00 (20)				opnagnam		, •,
Field Observations:							
Surface Water Present?	Yes NoX	Depth (inches	s): N/A				
Water Table Present?	Yes X No	Depth (inches	s): 4				
Saturation Present?	Yes No X	Depth (inches	s): >20	Wetland Hyd	drology Present?	Yes X	_ No
(includes capillary fringe)							
Describe Recorded Dat	a (stream gauge, monitoring wel	, aerial photos, p	revious inspection	າs), if available	:		
Remarks:							
A positive indication of	wetland hydrology was observed	(at least one prin	many indicator)				
A positive indication of	welland nydrology was observed	(at least one prii	nary mulcator).				
Aguatic Fauna: crabs.							
riqualio rauna. orabo.							

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft \	% cover	Species?	Status	Number of Dominant Species	
4 44 64 4			Оресіез:	Otatus	·	/A\
					That Are OBL, FACW, or FAC:	(A)
2						
3					Total Number of Dominant	
4					Species Across All Strata: 0	(B)
5						
6					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC:	(A/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1. None Observed	·				Total % Cover of: Multiply by:	Ì
2.					OBL species 0 x 1 = 0	
3.				-	FACW species 0 x 2 = 0	_
					FAC species 0 x 3 = 0	_
4			-		· — — — — — — — — — — — — — — — — — — —	_
5						-
6					UPL species	—
			= Total Cover		Column Totals: (A) 0	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = N/A	
1. None Observed						
2.					Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
4.					2 - Dominance Test is >50%	
5.					3 - Prevalence Index is ≤ 3.0 ¹	
					Problematic Hydrophytic Vegetation ¹ (Explain)	
6			T-1-1-0		Problematic Hydrophytic vegetation (Explain)	
			= Total Cover	_	1	
		0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
1. None Observed					Definitions of Five Vegetation Strata:	
2					Tree - Woody plants, excluding woody vines,	
3					approximately 20 ft (6m) or more in height and 3 in.	
4					(7.6 cm) or larger in diameter at breast height (DBH).	
5.						
6.					Sapling - Woody plants, excluding woody vines,	
			-		approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8						
9					Shrub - Woody plants, excluding woody vines,	
10						
11					approximately 3 to 20 ft (1 to 6 m) in height.	
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size	:30 ft)				herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2.					3 ft (1 m) in height.	
3.						
4.					Woody vine - All woody vines, regardless of height.	
						i
5	-		= Total Cavar		Lindrambudia	
			= Total Cover	_	Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes NoX	
Remarks: (if observed, list m	norphological adaptat	ions below).			
No positive indication of buds	anhutia vagatatian uu		d (>EOO/ of dominan	t anasias inde	aved as EAC as dries)	
No positive indication of hydr	opnytic vegetation wa	as observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).	
No vegetation present.						

epth	Matrix			Redox F	eatures				
inches)	Color (moist)	%_	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-4	10YR 4/3	95	10YR 4/6_	5	C	PL	Sandy Loam	Dual Matrix	
4-20	N 5	_60_	None				Sandy Loam		
4-20	N 4	40	None None	<u>-</u>			Sandy Loam		
	Concentration, D=Dep	bletion, RM	=Reduced Matrix, N	IS=Masked	Sand Grains.	² Location: F	PL=Pore Lining, M=N	Matrix.	
Hydric Soil	ls Indicators: (Appl	icable to	all LRRs, unless ot	herwise no	oted.)		Indicators for P	roblematic Hydric Soils ³ :	
Histos	ol (A1)		Polyva	ue Below S	Surface (S8) (L	RR S, T, U)	1 cm Muck	(A9) (LRR O)	
Histic	Epipedon (A2)		Thin Da	ark Surface	e (S9) (LRR S,	T, U)	2 cm Muck (A10) (LRR S)		
Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O)						Reduced Vertic (F18) (outside MLRA 150A,B)			
Hydro	gen Sulfide (A4)		Loamy Gleyed Matrix (F2)				Piedmont F	loodplain Soils (F19) (LRR P, S, T	
Stratifi	ed Layers (A5)		Depleted Matrix (F3)				Anomalous	Bright Loamy Soils (F20)	
Organ	ic Bodies (A6) (LRR	P, T, U)	Redox	Dark Surfa	ce (F6)		(MLRA 153B)		
5 cm N	Mucky Mineral (A7) (L	.RR P, T, I	J) Deplete	ed Dark Su	rface (F7)		Red Parent Material (TF2)		
Muck I	Presence (A8) (LRR	U)	Redox	Depression	ns (F8)		Very Shallow Dark Surface (TF12)		
1 cm N	Muck (A9) (LRR P, T)		Marl (F	10) (LRR L	J)		Other (Explain in Remarks)		
Deplet	ed Below Dark Surfa	ce (A11)	Deplete	ed Ochric (I	F11) (MLRA 1 5	51)			
Thick	Dark Surface (A12)		Iron-Ma	anganese N	//asses (F12) (LRR O, P, T)	³ Indicators of hydrophytic vegetation and		
Coast	Prairie Redox (A16)	(MLRA 15	OA)Umbrio	Surface (F	13) (LRR P, T ,	, U)	wetland hydrology must be present, unless disturbed or problematic.		
Sandy	Mucky Mineral (S1)	(LRR O, S) Delta C	ochric (F17) (MLRA 151)		uniess un	sturbed or problematic.	
X Sandy	Gleyed Matrix (S4)		Reduce	ed Vertic (F	18) (MLRA 15	0A, 150B)			
Sandy	Redox (S5)		Piedmo	ont Floodpla	ain Soils (F19)	(MLRA 149A)			
Strippe	ed Matrix (S6)		Anoma	lous Bright	Loamy Soils (F	20) (MLRA 14	9A, 153C, 153D)		
Dark S	Surface (S7) (LRR P,	S, T, U)							
	Layer (if observed)	:							
Type:									
Depth (i	nches):					Hydri	c Soil Present? Y	'es <u>X</u> No	
Remarks:									

Project/Site:	Bluewater SPM	Co	ounty:	Nueces	San	npling Date:	February 5, 2019
Applicant/Owner:	Lloyd Engineer		State				DPB017 PSS
• • • • • • • • • • • • • • • • • • • •	, ,		ection, Township	, Range:		 N/A	
Landform (hillslope, terrace, et		ter Lo	ocal relief (conca	ve, convex, nor	ne): Conc	ave Slope (%): 0-5
Subregion (LRR or MLRA):					·	 079991 Dat	um: North American Datum 1983
Soil Map Unit Name:		y loam, rarely flood			NWI Classific		E1UBL
Are climatic / hydrologic condit	tions on the site typical for this t	time of year? ((if no, explain		
Are Vegetation No	,Soil No ,or Hydrology	No significar	ntly disturbed?	Are "Normal Ci	ircumstances"	present? Yes	X No
Are Vegetation No	,Soil No ,or Hydrology	No naturally	problematic?	(If ne	eeded, explain	any answers in I	Remarks.)
SUMMARY OF FINDIN	NGS - Attach site map	showing san	nnling noin	locations	transacts	important	foatures etc
- COMMINANT OF THE	- Attach Site map	Silowing Sui	ilbiilig boili	. 1000110113,	, transcots	, important	
Hydrophytic Vegetation Prese		No					
Hydric Soil Present?		No	Is the Sampl	ed Area			
Wetland Hydrology Present?	YesX	No	within a Wet	and?	Yes	X No	
Remarks:							
This point was determine	d to be within a wetland due to	the presence of all	I 3 wetland criter	a.			
HYDROLOGY	4						
Wetland hydrology Indi						,	m of two required)
	num of one is required; check al					Soil Cracks (B6	
X Surface Water (A1	· . —	Aquatic Fauna (B	*				ncave Surface (B8)
High Water Table ((A2)	Marl Deposits (B1			Drainage Patterns (B10)		
Saturation (A3)		Hydrogen Sulfide	, ,	Dooto(C2)		rim Lines (B16)	o (C2)
Water Marks (B1)	(Ta)	Oxidized Rhizosp	-	100IS(U3)		ason Water Tabl	e (G2)
Sediment Deposits Drift Deposits (B3)	· · —	Presence of Redu Recent Iron Redu	, ,	vila (C6)		h Burrows (C8)	rial Imagery (C9)
Algal Mat or Crust		Thin Muck Surface		ilis (CO)		rphic Position (D	, ,
Iron Deposits (B5)		Other (Explain in				v Aquitard (D3)	2)
	on Aerial Imagery (B7)	Other (Explain in	itelliaiks)			eutral Test (D5)	
Water-Stained Lea						num moss (D8) (I	RR T III
Water-Stained Lea	Ve3 (D9)				Орпаді	idili illoss (Do) (i	-IXIX 1, 0)
Field Observations:							
Surface Water Present?	YesX No	Depth (inches):	2	ı			
	Yes NoX	Depth (inches):	>20	ı			
Saturation Present?	Yes NoX	Depth (inches):	>20	Wetland Hyd	rology Preser	nt? Yes	(No
(includes capillary fringe)							
Describe Recorded Data	(stream gauge, monitoring well	, aerial photos, pre	evious inspection	s), if available:			
Remarks:							
A positive indication of w	atland budgalagu waa abaar ood	(at least one prime	am, indicator)				
A positive indication of we	etland hydrology was observed	(at least one prima	ary indicator).				
Aquatic Fauna: fish.							
Aquatic i auna. iisii.							

Sampling Point: DPB017_PSS

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft.)	% cover		Status	Number of Dominant Species
4 14 64 4	70 00 001	<u>оролоо :</u>	Otatao	That Are OBL, FACW, or FAC: 1 (A)
1. None Observed 2	-	· ——		That Ale obe, I New, Si I No.
3	-	· ——		Total Number of Dominant
4.		<u> </u>		Species Across All Strata: 1 (B)
		· —		Species / Michaela.
5				Percent of Dominant Species
·	0	= Total Cover		That Are OBL, FACW, or FAC: 100% (A/B)
50% of total cover		20% of total cover:	0	110070 (705)
Sapling Stratum (Plot size: 30 ft.)		20% of total cover.		Prevalence Index Worksheet:
1 Nana Observed				Total % Cover of: Multiply by:
				OBL species 100 x 1 = 100
2				FACW species 0 x 2 = 0
3				FAC species 0 x3 = 0
4				FACU species 0 x 4 = 0
5				UPL species 0 x 5 = 0
6	0	= Total Cover		Column Totals: 100 (A) 100 (B)
50% of total cover		20% of total cover:	Λ	(A) 100 (B)
Shrub Stratum (Plot size: 30 ft.)		2070 OI LOLAI COVEI.		Prevalence Index = B/A = 1.00
	100	Voc	OBL	Prevalence index – B/A – 1.00
		Yes	UBL	Hydrophytic Vegetation Indicators:
2		<u> </u>		1 - Rapid Test for Hydrophytic Vegetation
3		<u> </u>		X 2 - Dominance Test is >50%
4	-			X 3 - Prevalence Index is $\leq 3.0^{1}$
5		· —		Problematic Hydrophytic Vegetation ¹ (Explain)
6	400			Problematic Hydrophytic Vegetation (Explain)
500/ - 54-4-1		= Total Cover	20	The street control of
50% of total cover	: 50	20% of total cover:	20	Indicators of hydric soil and wetland hydrology must
Herb Stratum (Plot size: 30 ft.)				be present, unless disturbed or problematic.
1. None Observed		· ——		Definitions of Five Vegetation Strata:
2				Tree - Woody plants, excluding woody vines,
3				approximately 20 ft (6m) or more in height and 3 in.
4				(7.6 cm) or larger in diameter at breast height (DBH).
5				Sapling - Woody plants, excluding woody vines,
6				approximately 20 ft (6 m) or more in height and less
7		·		than 3 in. (7.6 cm) DBH.
8				man o m. (7.0 om) BBM.
9				Shrub - Woody plants, excluding woody vines,
10				approximately 3 to 20 ft (1 to 6 m) in height.
11		- 		approximately 5 to 25 ft (1 to 5 ff) if floight.
500/ 51 1 1		= Total Cover	0	Herb - All herbaceous (non-woody) plants, including
50% of total cover	:0	20% of total cover:		herbaceous vines, regardless of size, <u>and</u> woody
Woody Vine Stratum (Plot size: 30 ft.)				plants, except woody vines, less than approximately
1. None Observed				3 ft (1 m) in height.
2		·		o it (1 m) in noight.
3		·		Woody vine - All woody vines, regardless of height.
4				Woody vine - All woody vines, regardless of neight.
5				Hadasahada
500/ - 54-4-1		= Total Cover	0	Hydrophytic
50% of total cover	: 0	20% of total cover:	0	Vegetation
				Present? Yes <u>X</u> No
Damanda, (if also much list much state and sta	diame to t	`		
Remarks: (if observed, list morphological adapta	tions below).		
A positive indication of hydrophytic vegetation wa	s observed	(>50% of dominant	species index	xed as OBL, FACW, or FAC).
A positive indication of hydrophytic vegetation wa	s observed	(Prevalence Index is	s ≤ 3.00).	

Depth	Matrix			Redox F	eatures					
nches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-20	N 5	95	None				Clay			
0-20	N 2.5	5	None				Clay			
					<u> </u>					
 Туре: С=Со	oncentration, D=Dep	oletion, RM=R	Reduced Matrix, M	Masked	d Sand Grains.	² Location: PI	 _=Pore Lining, M=Matr	ix.		
lydric Soils	Indicators: (Appl	icable to all	LRRs, unless otl	herwise n	oted.)			lematic Hydric Soils ³ :		
Histosol	(A1)		Polyval	ue Below S	Surface (S8) (L	.RR S, T, U)	1 cm Muck (A9	(LRR 0)		
Histic E	pipedon (A2)		Thin Da	ark Surface	e (S9) (LRR S ,	T, U)	2 cm Muck (A1	0) (LRR S)		
Black Hi	istic (A3)		Loamy	Mucky Mir	neral (F1) (LRR	(O)	Reduced Vertic	(F18) (outside MLRA 150A,		
 Hydroge	en Sulfide (A4)		X Loamy	Gleyed Ma	atrix (F2)		Piedmont Floor	Iplain Soils (F19) (LRR P, S, 1		
Stratified	d Layers (A5)		Deplete	ed Matrix (F	F3)		Anomalous Bright Loamy Soils (F20)			
Organic	Bodies (A6) (LRR I	P, T, U)	Redox	Dark Surfa	ice (F6)		(MLRA 153B)			
5 cm Mu	ucky Mineral (A7) (L	.RR P, T, U)	Depleted Dark Surface (F7)				Red Parent Ma	terial (TF2)		
Muck Pr	resence (A8) (LRR	U)	Redox	Depression	ns (F8)		Very Shallow D	ark Surface (TF12)		
1 cm Mu	uck (A9) (LRR P, T)	ļ	Marl (F10) (LRR U)				Other (Explain	n Remarks)		
Depleted	d Below Dark Surfa	ce (A11)	Deplete	ed Ochric (F11) (MLRA 1	51)				
Thick Da	ark Surface (A12)		Iron-Ma	anganese N	Masses (F12)	(LRR O, P, T)		hydrophytic vegetation and		
Coast P	rairie Redox (A16) ((MLRA 150A)	Umbric	Surface (F	13) (LRR P, T	, U)		ology must be present,		
Sandy M	Mucky Mineral (S1)	(LRR O, S)	Delta C	Ochric (F17) (MLRA 151)		uniess distur	bed or problematic.		
Sandy G	Gleyed Matrix (S4)		Reduce	ed Vertic (F	18) (MLRA 15	0A, 150B)				
Sandy R	Redox (S5)		Piedmo	nt Floodpl	ain Soils (F19)	(MLRA 149A)				
Stripped	l Matrix (S6)		Anoma	lous Bright	Loamy Soils (I	=20) (MLRA 149	A, 153C, 153D)			
Dark Su	rface (S7) (LRR P,	S, T, U)								
Restrictive L	.ayer (if observed)	:								
Type:										
Depth (inc	ches):					Hydric	Soil Present? Yes	X No		
emarks:						•				
positive ind	lication of hydric soi	l was observe	ed.							
	-									
•										

Project/Site:	Bluewater SPM	County:	Nueces	Sampling Date:	February 5, 2019		
Applicant/Owner:	Lloyd Engineering	St	ate: Texa	as Sample Point:	DPB018_PEM		
Investigator(s): C.	Bailey and N. Trivi	ino Section, Townsl	nip, Range:	N/A			
Landform (hillslope, terrace, et		Local relief (con	cave, convex, none):	Concave Slope ((%): 0-5		
Subregion (LRR or MLRA):	None	Lat:27	.862647 Long:	-97.081215 Da	tum: North American Datum 1983		
Soil Map Unit Name:	·	asionally ponded		/I Classification:	E2EM1N		
	tions on the site typical for this time of	· · · · · · · · · · · · · · · · · · ·		o, explain in Remarks.)			
Are Vegetation No				mstances" present? Yes			
Are Vegetation No	,Soil No ,or Hydrology No	naturally problematic?	(If neede	ed, explain any answers in	Remarks.)		
SUMMARY OF FINDIN	NGS - Attach site map show	wing sampling poi	nt locations, tra	ansects, important	features, etc.		
Hydrophytic Vegetation Prese	ent? Yes X No						
Hydric Soil Present?		Is the Sam	pled Area				
Wetland Hydrology Present?		within a W	/etland?	Yes X No)		
Remarks:							
This point was determine	d to be within a wetland due to the pre	esence of all 3 wetland cri	teria				
Triis point was determine	a to be within a welland due to the pro	sserioe of all o welland on	.ona.				
HYDROLOGY							
Wetland hydrology Indi	cators:			oondon/Indicators (minimu	um of two required)		
	num of one is required; check all that a	annly)	<u> </u>	condary Indicators (minimu Surface Soil Cracks (B			
Surface Water (A1	·	tic Fauna (B13)		Sparsely Vegetated Co	*		
X High Water Table	· — ·	Deposits (B15) (LRR U)		Drainage Patterns (B10	, ,		
Saturation (A3)	· · · ——	ogen Sulfide Odor (C1)					
Water Marks (B1)		zed Rhizospheres on Livir	ng Roots(C3)	Dry-Season Water Tab			
Sediment Deposits		ence of Reduced Iron (C4)	- · · · —	Crayfish Burrows (C8)	,		
Drift Deposits (B3)	· ·	nt Iron Reduction in Tilled		Saturation Visible on A	erial Imagery (C9)		
Algal Mat or Crust	(B4) Thin !	Muck Surface (C7)		Geomorphic Position (I	02)		
Iron Deposits (B5)	Other	(Explain in Remarks)		Shallow Aquitard (D3)			
Inundation Visible	on Aerial Imagery (B7)		<u></u>	_ FAC-Neutral Test (D5)			
Water-Stained Lea	ves (B9)		_	_ Sphagnum moss (D8)	(LRR T, U)		
Field Observations:							
		oth (inches): N/A					
		oth (inches): 0	Made all balants	D	v N-		
Saturation Present? (includes capillary fringe)	Yes NoX Dep	oth (inches): >20	Wetland Hydrolo	gy Present? Yes	X NO		
	(stream gauge, monitoring well, aerial	I photos provious inspect	ions) if available:				
Describe Necolded Data	(Stream gauge, monitoring well, aeria	i priotos, previous irispect	oris), ii avaliable.				
Remarks:							
A positive indication of we	etland hydrology was observed (at lea	st one primary indicator).					

		Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:	30 ft.)	% cover	Species?	Status	Number of Dominant Species
1 Name Observed	,				That Are OBL, FACW, or FAC: 1 (A)
2.					()
3.					Total Number of Dominant
4.					Species Across All Strata: 1 (B)
5.					(2)
6.					Percent of Dominant Species
0			= Total Cover		That Are OBL, FACW, or FAC: 100% (A/B)
	50% of total cover:		20% of total cover:	0	110070 (700)
Sapling Stratum (Plot size:	30 ft.)		2070 Of total cover.		Prevalence Index Worksheet:
1. None Observed					Total % Cover of: Multiply by:
					OBL species 100 x 1 = 100
2					FACW species 0 x 2 = 0
3.					FAC species 0 x 3 = 0
4					FACU species 0
5					· ———
6			= Total Cover		
	500/ · £4.4.1		= Total Cover	•	Column Totals: (A) (B
Shrub Stratum (Plot size:	50% of total cover: 30 ft.)		20% of total cover:		Prevalence Index = B/A =
1. None Observed					
2					Hydrophytic Vegetation Indicators:
3					1 - Rapid Test for Hydrophytic Vegetation
4					X 2 - Dominance Test is >50%
5					X 3 - Prevalence Index is ≤ 3.0 ¹
6					Problematic Hydrophytic Vegetation ¹ (Explain)
		0	= Total Cover		
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.
1. Avicennia germinans		100	Yes	OBL	Definitions of Five Vegetation Strata:
2.	<u>.</u>				Tree - Woody plants, excluding woody vines,
3.					approximately 20 ft (6m) or more in height and 3 in.
4.					(7.6 cm) or larger in diameter at breast height (DBH).
5.					
6.					Sapling - Woody plants, excluding woody vines,
7.					approximately 20 ft (6 m) or more in height and less
8.					than 3 in. (7.6 cm) DBH.
9.					
10.					Shrub - Woody plants, excluding woody vines,
11.					approximately 3 to 20 ft (1 to 6 m) in height.
		100	= Total Cover		
	50% of total cover:		20% of total cover:	20	Herb - All herbaceous (non-woody) plants, including
Woody Vine Stratum (Plot size:			2070 01 10101 001011		herbaceous vines, regardless of size, and woody
1. None Observed					plants, except woody vines, less than approximately
2.					3 ft (1 m) in height.
3					
4.	<u> </u>				Woody vine - All woody vines, regardless of height.
5					
0	-		= Total Cover		Hydrophytic
	50% of total cover:		20% of total cover:	0	Vegetation
	0070 01 10101 00101.		2070 01 10101 00701.		Present? Yes X No
					Tresent: Tes X No
Remarks: (if observed, list me	orphological adaptati	ons below).		1
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	species index	xed as OBL, FACW, or FAC).
A positive indication of hydrop	ohytic vegetation was	observed	(Prevalence Index is	s ≤ 3.00).	

Depth inches)	Matrix Color (moist)	%	Color (moist)	Redox F %	Type ¹	Loc ²	Texture	Remarks	
0-3	2.5Y 5/1	100	None				Sandy Loam	T CONTRACTOR	
3-20	N 4	98	10YR 5/4	2		PL	Sandy Loam		
	Concentration, D=Dep					² Location: F	PL=Pore Lining, M=Matri		
•	s Indicators: (Appli	icable to a	•		•			ematic Hydric Soils ³ :	
Histoso	, ,				Surface (S8) (L		1 cm Muck (A9)		
	Epipedon (A2)				e (S9) (LRR S,	· ·	2 cm Muck (A10		
	Histic (A3)			-	neral (F1) (LRR	(O)		(F18) (outside MLRA 150A,	
′	gen Sulfide (A4)			Gleyed Ma	, ,			plain Soils (F19) (LRR P, S,	
	ed Layers (A5) c Bodies (A6) (LRR F) T IIV		ed Matrix (I Dark Surfa	,		Anomalous Brig (MLRA 153B)	ht Loamy Soils (F20)	
	lucky Mineral (A7) (L			ed Dark Su	` '		Red Parent Mat	erial (TF2)	
	Presence (A8) (LRR I			Depression	` '			ark Surface (TF12)	
	fuck (A9) (LRR P, T)	•		10) (LRR I	` '		Other (Explain in Remarks)		
	ed Below Dark Surfac				-, F11) (MLRA 15	51)		,	
Thick E	Dark Surface (A12)		Iron-Ma	anganese l	Masses (F12) (LRR O, P, T)		hydrophytic vegetation and	
Coast I	Prairie Redox (A16) (MLRA 150	A) Umbrio	Surface (F	13) (LRR P, T ,	, U)		ology must be present,	
Sandy	Mucky Mineral (S1) (LRR O, S)	Delta C	Ochric (F17) (MLRA 151)		uniess disturt	ped or problematic.	
X Sandy	Gleyed Matrix (S4)		Reduce	ed Vertic (F	18) (MLRA 15	0A, 150B)			
X Sandy	Redox (S5)			-	ain Soils (F19)	-			
	ed Matrix (S6)		Anoma	lous Bright	Loamy Soils (F	F20) (MLRA 14	9A, 153C, 153D)		
Dark S	urface (S7) (LRR P ,	S, T, U)							
Restrictive	Layer (if observed):								
Type:		•							
Depth (in	nches):					Hydri	c Soil Present? Yes	X No	
Dopui (ii						,u		<u> </u>	
Remarks:						!			
tomarko.									
A positive in	dication of hydric soi	l was obsei	rved.						

Project/Site:	Bluewater SPM	County:	Nueces	Sampling Da	ate: February 5, 2019
Applicant/Owner:	Lloyd Engineering			Texas Sample Poi	
• • • • • • • • • • • • • • • • • • • •	Bailey and N. Triv	vino Section, Tow	nship, Range:		N/A
Landform (hillslope, terrace, etc.			concave, convex, nor	ne): None	Slope (%): 0-5
0 ' " " " " " " " " "	None		27.862612 Lo		Datum: North American Datum 1983
Soil Map Unit Name:		n, rarely flooded		NWI Classification:	
	ons on the site typical for this time of		YES	(if no, explain in Rema	
Are Vegetation No ,S	- · · · · · · · · · · · · · · · · · · ·	significantly disturb			•
Are Vegetation No ,S		naturally problemat		eeded, explain any ans	
STIMMARY OF FINDING	GS - Attach site map sho	wing compling r	oint locations	transacts impo	artant foatures etc
SUMMART OF FINDING	33 - Attach site map sho	wing sampling p	onitiocations,	transects, impo	rtant leatures, etc.
Hydrophytic Vegetation Presen	nt? Yes No _	<u>x</u>			
Hydric Soil Present?			ampled Area		
Wetland Hydrology Present?	Yes X No _	within a	a Wetland?	Yes	NoX
Remarks:					
HYDROLOGY	not to be within a wetland due to th		9		
Wetland hydrology Indica	ators:			Secondary Indicators	(minimum of two required)
Primary Indicators (minimul	m of one is required; check all that	apply)		Surface Soil Cra	acks (B6)
X Surface Water (A1)	Aqua	itic Fauna (B13)		Sparsely Vegeta	ated Concave Surface (B8)
High Water Table (A	2) Marl	Deposits (B15) (LRR U)	Drainage Patter	ns (B10)
Saturation (A3)	Hydro	ogen Sulfide Odor (C1)		Moss Trim Line	s (B16)
Water Marks (B1)	Oxidi	ized Rhizospheres on L	iving Roots(C3)	Dry-Season Wa	iter Table (C2)
Sediment Deposits (I	B2) Pres	ence of Reduced Iron (0	C4)	Crayfish Burrow	/s (C8)
Drift Deposits (B3)	Rece	ent Iron Reduction in Till	ed Soils (C6)	Saturation Visib	ole on Aerial Imagery (C9)
Algal Mat or Crust (B	34) Thin	Muck Surface (C7)		Geomorphic Po	sition (D2)
Iron Deposits (B5)	Othe	r (Explain in Remarks)		Shallow Aquitar	rd (D3)
Inundation Visible on	ı Aerial Imagery (B7)			FAC-Neutral Te	est (D5)
Water-Stained Leave	es (B9)			Sphagnum mos	ss (D8) (LRR T, U)
Field Observations:					
Surface Water Present? Y	es X No De	pth (inches): 2	_		
Water Table Present? Y	es No X De	pth (inches): >20	_		
Saturation Present? Y	es No X De	pth (inches): >20	Wetland Hyd	rology Present? Y	es X No
(includes capillary fringe)		-			
Describe Recorded Data (s	stream gauge, monitoring well, aeria	al photos, previous insp	ections), if available:		
			•		
Remarks:					
A positive indication of wetl	land hydrology was observed (at lea	ast one primary indicato	r).		

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft \	% cover	Species?	Status	Number of Dominant Species	
1 Name Observed		70 COVE	Оресіез:	Otatus	·	
					That Are OBL, FACW, or FAC: (A	٦)
2						
3					Total Number of Dominant	
4					Species Across All Strata: 0 (E	3)
5						
6					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC: (A	√B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1 Nana Observed					Total % Cover of: Multiply by:	
2.					OBL species 0 x 1 = 0	_
					FACW species	_
3						_
4						_
5					FACU species 0 x 4 = 0	_
6					UPL species 0 x 5 = 0	_
			= Total Cover		Column Totals: 0 (A) 0	_ (B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = N/A	_
1. None Observed						
2.	_				Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
					2 - Dominance Test is >50%	
4					3 - Prevalence Index is ≤ 3.0 ¹	
5.					Problematic Hydrophytic Vegetation ¹ (Explain)	
6					Problematic Hydrophytic Vegetation (Explain)	
			= Total Cover		4	
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
1. None Observed					Definitions of Five Vegetation Strata:	
2					Tree - Woody plants, excluding woody vines,	
3					approximately 20 ft (6m) or more in height and 3 in.	
4.			· · · · · · · · · · · · · · · · · · ·	-	(7.6 cm) or larger in diameter at breast height (DBH).	
5.						
6.					Sapling - Woody plants, excluding woody vines,	
			-		approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8						
9					Shrub - Woody plants, excluding woody vines,	
10					approximately 3 to 20 ft (1 to 6 m) in height.	
11						
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:	30 ft)				herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2					3 ft (1 m) in height.	
3.						
4.	-				Woody vine - All woody vines, regardless of height.	
5.	•					
o		0	= Total Cover		Hydrophytic	
	50% of total cover:		20% of total cover:	0	Vegetation	
	50% of total cover.		20% of total cover.		-	
					Present? Yes NoX	
Remarks: (if observed, list m	orphological adaptat	ions below).			
No positive indication of hydro	phytic vegetation wa	as observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).	
peeinte maieanen et ilyan	prijus regetation in		a (=0070 0. aona	. 0000.00	5.50 45 1716 5. 4.151).	
No vogetation present						
No vegetation present.						

Depth	Matrix			Redox F	eatures			
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-20	N 4	100	None		<u></u>		Sandy Clay Loam	
		Lation DM=D	aduand Matrix N		L Cand Crains	2l coation: D	L =Doro Lining M=Motri	
	oncentration, D=Dep Indicators: (Appli					Location. P	L=Pore Lining, M=Matri	lematic Hydric Soils ³ :
•		icable to all L	•		Surface (S8) (L	DD C T II\	1 cm Muck (A9)	
Histosol	, ,				e (S9) (LRR S ,			
	pipedon (A2)					· ·	2 cm Muck (A10	
	Black Histic (A3) Loamy Mucky Mineral (F1) (LRR 0) Hydrogen Sulfide (A4) X Loamy Gleyed Matrix (F2)				. ()		(F18) (outside MLRA 150A	
	, ,		X Loamy Gleyed Matrix (F2)					plain Soils (F19) (LRR P, S,
	d Layers (A5)	<u> </u>						ht Loamy Soils (F20)
	ic Bodies (A6) (LRR P, T, U) Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Depleted Dark Surface (F7)					(MLRA 153B)		
		· · · · · · · · · · · · · · · · · · ·					Red Parent Mat	
-	resence (A8) (LRR I	-		Depression				ark Surface (TF12)
	uck (A9) (LRR P, T)			10) (LRR I	-		Other (Explain i	n Remarks)
	d Below Dark Surfac	ce (A11)		•	F11) (MLRA 1	•	•	
	ark Surface (A12)			•	Masses (F12)			hydrophytic vegetation and
Coast P	rairie Redox (A16) (MLRA 150A)	Umbric	Surface (F	13) (LRR P, T	, U)		ology must be present, bed or problematic.
Sandy M	/lucky Mineral (S1)	(LRR O, S)	Delta C	Ochric (F17) (MLRA 151)		uilless distuit	soa or problematic.
Sandy G	Gleyed Matrix (S4)		Reduce	ed Vertic (F	18) (MLRA 15	0A, 150B)		
Sandy R	Redox (S5)		Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A)		
Stripped	l Matrix (S6)		Anoma	lous Bright	Loamy Soils (I	20) (MLRA 14	9A, 153C, 153D)	
Restrictive L	ayer (if observed):	:						
Type:						Hydric	Soil Present? Yes	X No
						Hydrid	Soil Present? Yes_	X No
Type: Depth (inc						Hydrid	c Soil Present? Yes _	X No
Type: Depth (inc						Hydrid	c Soil Present? Yes _	X No
Type: Depth (inc						Hydrid	c Soil Present? Yes _	X No
Type: Depth (inc	ches):					Hydrid	c Soil Present? Yes _	X No
Type: Depth (inc	ches):					Hydrid	c Soil Present? Yes _	X No
Type: Depth (inc	ches):					Hydrid	c Soil Present? Yes _	X No
Type: Depth (inc	ches):					Hydri	c Soil Present? Yes _	X No
Type: Depth (inc	ches):					Hydrid	c Soil Present? Yes _	XNo
Type: Depth (inc	ches):					Hydrid	c Soil Present? Yes _	XNo
Type: Depth (inc	ches):					Hydrid	c Soil Present? Yes _	X No
Type: Depth (inc	ches):					Hydrid	c Soil Present? Yes	X No
Type: Depth (inc	ches):					Hydri	c Soil Present? Yes	X No
Type: Depth (inc	ches):					Hydri	c Soil Present? Yes	X No
Type: Depth (inc	ches):					Hydri	c Soil Present? Yes	X No
Type: Depth (inc	ches):					Hydri	c Soil Present? Yes	X No
Type: Depth (inc	ches):					Hydrid	c Soil Present? Yes	X No
Type: Depth (inc	ches):					Hydri	c Soil Present? Yes	X No
Type: Depth (inc	ches):					Hydri	c Soil Present? Yes	X No
Type: Depth (inc	ches):					Hydri	c Soil Present? Yes	X No
Type: Depth (inc	ches):					Hydrid	c Soil Present? Yes	X No
Type: Depth (inc	ches):					Hydrid	c Soil Present? Yes	X No
Type: Depth (inc	ches):					Hydrid	c Soil Present? Yes	X No
Type: Depth (inc	ches):					Hydrid	c Soil Present? Yes	X No
Type: Depth (inc	ches):					Hydrid	c Soil Present? Yes	X No

Project/Site:	Bluewater SPM	Со	unty:	Nueces	Sa	mpling Date:	February 5, 2019
Applicant/Owner:	Lloyd Engineer		State				DPB020 PEM
• • • • • • • • • • • • • • • • • • • •	, , , , , , , , , , , , , , , , , , ,		ection, Township	, Range:		 N/A	
Landform (hillslope, terrace, etc		ter Lo	ocal relief (conca	ve, convex, no	ne): No	ne Slope	(%): 0-5
Subregion (LRR or MLRA):					' <u>-</u>		atum: North American Datum 1983
Soil Map Unit Name:		s, occasionally pon			-	ication:	E2EM1N
Are climatic / hydrologic conditi	ons on the site typical for this t	ime of year? (res / No)	YES	if no, explai	n in Remarks.)	
Are Vegetation No,	Soil No ,or Hydrology	No significar	ntly disturbed?	Are "Normal C	_ Circumstances	" present? Ye	s X No
Are Vegetation No,	Soil No , or Hydrology	No naturally	problematic?	(If n	eeded, explai	n any answers i	n Remarks.)
SUMMARY OF FINDIN	IGS - Attach site man	showing san	nnling noin	locations	transect	s imnortan	it features etc
- COMMINANT OF THE	——————————————————————————————————————	Silowing Sun	inpining point		, trailscot	o, importan	it routures, etc.
Hydrophytic Vegetation Prese	ent? Yes X	No					
Hydric Soil Present?		No	Is the Sampl	ed Area			
Wetland Hydrology Present?	Yes X	No	within a Wet	land?	Yes	<u>X</u> N	o
Remarks:							
·	d to be within a wetland due to	the presence of all	3 wetland criter	ia.			
HYDROLOGY							
Wetland hydrology Indic							num of two required)
	um of one is required; check al		4.5.			e Soil Cracks (I	
Surface Water (A1)		Aquatic Fauna (B					oncave Surface (B8)
X High Water Table (A	A2)	Marl Deposits (B1				ige Patterns (B1	•
Saturation (A3) Water Marks (B1)		Hydrogen Sulfide Oxidized Rhizosp		Poots(C3)		Trim Lines (B16 eason Water Ta	*
Sediment Deposits	(B2)	Presence of Redu	-	(C3)		sh Burrows (C8	, ,
Drift Deposits (B3)	(B2)	Recent Iron Redu	, ,	nile (C6)			Aerial Imagery (C9)
Algal Mat or Crust (B4)	Thin Muck Surfac		113 (00)		orphic Position	, ,
Iron Deposits (B5)		Other (Explain in				w Aquitard (D3)	, ,
	on Aerial Imagery (B7)	Other (Explain in	rtemants)			Viriquitara (Do) Neutral Test (D5	
Water-Stained Leav						num moss (D8)	*
	(20)					,a (20)	(, _,
Field Observations:							
Surface Water Present?	Yes NoX	Depth (inches):	N/A				
	Yes X No	Depth (inches):	0				
Saturation Present?	Yes No X	Depth (inches):	>20	Wetland Hyd	drology Prese	nt? Yes	X No
(includes capillary fringe)							
Describe Recorded Data ((stream gauge, monitoring well	, aerial photos, pre	vious inspection	s), if available:			
Remarks:							
A positive indication of we	etland hydrology was observed	(at least one prime	m, indicator)				
A positive indication of we	mand nydrology was observed	(at least one prima	ary mulcator).				
							l

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft)	% cover	Species?	Status	Number of Dominant Species	
4 44 64 4		70 00 001	<u>орожот.</u>	Otatao	That Are OBL, FACW, or FAC:	(A)
2.					That file obe, i flow, of the.	(,,)
					Total Number of Deminent	
3					Total Number of Dominant Species Across All Strata: 1	(B)
4					Species Across All Strata: 1	(B)
5					Down to C. Down to a Constitution	
6			T-1-1-0		Percent of Dominant Species	(A /D)
			= Total Cover	_	That Are OBL, FACW, or FAC: 100%	(A/B)
	50% of total cover:	0	20% of total cover:	0	Prevalence Index Worksheet:	
Sapling Stratum (Plot size:	30 ft.)					
					Total % Cover of: Multiply by:	
2					OBL species x 1 =100	
3					FACW species 0 x 2 = 0	
4			<u> </u>		FAC species 0 x 3 = 0	
5					FACU species 0 x 4 = 0	
6					UPL species 0 x 5 = 0	
		0	= Total Cover		Column Totals:100 (A)100	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = 1.00	
1. None Observed						
2.					Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
4.					X 2 - Dominance Test is >50%	
5.					X 3 - Prevalence Index is ≤ 3.0 ¹	
6.			· <u></u>		Problematic Hydrophytic Vegetation ¹ (Explain)	
		0	= Total Cover			
	50% of total cover:		20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:			. 2070 01 10101 007011		be present, unless disturbed or problematic.	
		100	Yes	OBL	Definitions of Five Vegetation Strata:	
2					Tree - Woody plants, excluding woody vines,	
					approximately 20 ft (6m) or more in height and 3 in.	
3					(7.6 cm) or larger in diameter at breast height (DBH).	
4					(7.0 cm) of larger in diameter at breast height (DBH).	
5					Sapling - Woody plants, excluding woody vines,	
6					approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8					anan 6 mm (1.16 6m) 221 m	
9					Shrub - Woody plants, excluding woody vines,	
10	-				approximately 3 to 20 ft (1 to 6 m) in height.	
11					approximately 5 to 20 ft (1 to 6 ff) in height.	
			= Total Cover		Herb - All herbaceous (non-woody) plants, including	
	50% of total cover:	50	20% of total cover:	20	herbaceous vines, regardless of size, <u>and</u> woody	
Woody Vine Stratum (Plot size:					plants, except woody vines, less than approximately	
1. None Observed						
2					3 ft (1 m) in height.	
3						
4					Woody vine - All woody vines, regardless of height.	
5						
		0	= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes <u>X</u> No	
Remarks: (if observed, list m	orphological adaptati	ions below).			
A positive indication of hydrog	hytic vegetation was	observed	(>50% of dominant	snecies index	red as OBL_FACW_or FAC)	
postaro maiodion oi riyurop	, ao rogotation was	. Jacon vou	, 50% or dominant	Species index	(32 a3 332, 17(31), 31 17(3).	
A positive indication of hydrog	hytic vegetation was	observed	(Prevalence Index is	s ≤ 3 00)		
71 postavo maioadon or mydrop	, ao vogotation was	. 55501 VGU	,. TOTALORIOG HINEX I	- J.00j.		

Depth	Matrix			Redox F	eatures				
(inches)	Color (moist)	%	Color (moist)	%_	Type ¹	Loc ²	Texture	Remarks	
0-3	2.5Y 5/1	100	None				Sandy Loam		
3-20	N 4	98	10YR 5/4	_2_	C	PL	Sandy Loam		
		<u> </u>		_					
1Type: C=C	Concentration, D=De		I-Paducad Matrix N	 1S=Masker		21 ocation: F	PL=Pore Lining, M=Matrix		
	ls Indicators: (App					Location. F	Indicators for Proble	•	
•		iicabie to	•		oteu.) Surface (S8) (Li	PP S T III	1 cm Muck (A9)	_	
Histosol (A1) Histic Epipedon (A2)					e (S9) (LRR S , 1	2 cm Muck (A10)	•		
Black Histic (A3)					neral (F1) (LRR	•		F18) (outside MLRA 150A,B	
	Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)				-,	Piedmont Floodplain Soils (F19) (LRR P, S, T)			
	ed Layers (A5)		Depleted Matrix (F3)				 :	nt Loamy Soils (F20)	
	ic Bodies (A6) (LRR	P. T. U)	Redox Dark Surface (F6)				(MLRA 153B)	<u></u>	
	/lucky Mineral (A7) (I			ed Dark Su			Red Parent Mate	erial (TF2)	
	Presence (A8) (LRR			Depression	` '			rk Surface (TF12)	
 1 cm N	/luck (A9) (LRR P, T)	Marl (F	10) (LRR I	υ)		Other (Explain in	` ,	
—— Deplet	ed Below Dark Surfa	ace (A11)	Deplete	ed Ochric (F11) (MLRA 15	1)		,	
Thick I	Dark Surface (A12)		Iron-Ma	anganese l	Masses (F12) (I	RR O, P, T)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
Coast	Prairie Redox (A16)	(MLRA 15	0A) Umbrio	Surface (F	=13) (LRR P, T,	U)			
Sandy	Mucky Mineral (S1)	(LRR O, S) Delta C	Chric (F17) (MLRA 151)				
X Sandy	Gleyed Matrix (S4)		Reduce	ed Vertic (F	18) (MLRA 15 0	A, 150B)			
X Sandy	Redox (S5)		Piedmo	nt Floodpl	ain Soils (F19) (MLRA 149A)			
Strippe	ed Matrix (S6)		Anoma	lous Bright	Loamy Soils (F	20) (MLRA 14	9A, 153C, 153D)		
Dark S	Surface (S7) (LRR P,	S, T, U)							
Restrictive	Layer (if observed):							
Type:									
Depth (ii	nches):					Hydri	c Soil Present? Yes _	No	
Remarks:						l			
A	ndication of hydric so								

Project/Site:	Bluewater SPM	C	County:	Nueces	S	ampling Date:	February 5, 2019
Applicant/Owner:	Lloyd Engineer		Stat		_	ample Point:	•
··· ———	, , , , , , , , , , , , , , , , , , ,		Section, Township	, Range:		 N/A	
Landform (hillslope, terrace, etc			Local relief (conca	· · · —	ione): Cor	icave Slope (%): 0-5
	None		Lat: 27.8				tum: North American Datum 1983
Soil Map Unit Name:		y loam, rarely floo				fication:	E2USP
Are climatic / hydrologic conditi	ons on the site typical for this t	ime of year?	(Yes / No)	YES	(if no, expla	in in Remarks.)	
Are Vegetation No	Soil No ,or Hydrology	No significa	antly disturbed?	Are "Normal	Circumstance:	s" present? Yes	X No
Are Vegetation No	Soil No ,or Hydrology	No naturall	ly problematic?	(If	needed, expla	in any answers in	Remarks.)
SUMMARY OF FINDIN	IGS - Attach site man	showing sa	mpling poin	t location	e transoc	te important	features etc
JOWNMAN OF THE	100 - Attach Site map	Silowing sa	inipinig poni	liocation	s, transec	is, important	Teatures, etc.
Hydrophytic Vegetation Prese	ent? Yes	NoX					
Hydric Soil Present?	Yes	NoX	Is the Samp	led Area			
Wetland Hydrology Present?	Yes X	No	within a We	tland?	Yes _	No	X
Remarks:							
This point was determined	d not to be within a wetland due	e to the lack of hy	drophytic vegetat	tion and hydrid	c soils		
This point was determined	Thot to be within a wettand due	s to the lack of my	varopriytic vegeta	ilon and nydin	5 30113.		
HYDROLOGY							
Wetland hydrology India	cators:				Secondary	Indicators (minimu	m of two required)
Primary Indicators (minim	um of one is required; check al	l that apply)			Surfa	ce Soil Cracks (B	5)
X Surface Water (A1)	Х	Aquatic Fauna (B13)		 Spars	sely Vegetated Co	ncave Surface (B8)
High Water Table (A2)	Marl Deposits (E	315) (LRR U)		 Drain	age Patterns (B10))
Saturation (A3)	_	Hydrogen Sulfid	le Odor (C1)		Moss	Trim Lines (B16)	
Water Marks (B1)		Oxidized Rhizos	spheres on Living	Roots(C3)	Dry-S	eason Water Tab	le (C2)
Sediment Deposits	(B2)	Presence of Red	duced Iron (C4)		Crayf	ish Burrows (C8)	. ,
Drift Deposits (B3)	·	Recent Iron Red	duction in Tilled S	oils (C6)	Satur	ation Visible on A	erial Imagery (C9)
Algal Mat or Crust (B4)	Thin Muck Surfa	ace (C7)		—— Geon	norphic Position (E	02)
Iron Deposits (B5)		Other (Explain in	n Remarks)		—— Shalle	ow Aquitard (D3)	,
Inundation Visible o	on Aerial Imagery (B7)				FAC-	Neutral Test (D5)	
Water-Stained Leav	= -, ,					gnum moss (D8) (LRR T, U)
	, ,					. , ,	
Field Observations:							
Surface Water Present?	Yes X No	Depth (inches	s): 5				
Water Table Present?	Yes No X	Depth (inches	s): >20				
	Yes NoX	Depth (inches	s): >20	Wetland Hy	drology Pres	ent? Yes	X No
(includes capillary fringe)							
Describe Recorded Data	stream gauge, monitoring well	, aerial photos, p	revious inspection	ns), if available	e:		
			·	,.			
Remarks:							
A positive indication of we	tland hydrology was observed	(at least one prin	nary indicator).				
Aquatic Fauna: crabs, fish	1.						

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft \	% cover	Species?	Status	Number of Dominant Species	
4 44 64 4			Оресіез:	Otatus	·	/A\
					That Are OBL, FACW, or FAC:	(A)
2						
3					Total Number of Dominant	
4					Species Across All Strata: 0	(B)
5						
6					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC:	(A/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1. None Observed	·				Total % Cover of: Multiply by:	Ì
2.					OBL species 0 x 1 = 0	
3.				-	FACW species 0 x 2 = 0	_
					FAC species 0 x 3 = 0	_
4			-		· — — — — — — — — — — — — — — — — — — —	_
5						-
6					UPL species	—
			= Total Cover		Column Totals: (A) 0	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = N/A	
1. None Observed						
2.					Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
4.					2 - Dominance Test is >50%	
5.					3 - Prevalence Index is ≤ 3.0 ¹	
					Problematic Hydrophytic Vegetation ¹ (Explain)	
6			T-1-1-0		Problematic Hydrophytic vegetation (Explain)	
			= Total Cover	_	1	
		0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
1. None Observed					Definitions of Five Vegetation Strata:	
2					Tree - Woody plants, excluding woody vines,	
3					approximately 20 ft (6m) or more in height and 3 in.	
4					(7.6 cm) or larger in diameter at breast height (DBH).	
5.						
6.					Sapling - Woody plants, excluding woody vines,	
			-		approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8						
9					Shrub - Woody plants, excluding woody vines,	
10						
11					approximately 3 to 20 ft (1 to 6 m) in height.	
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size	:30 ft)				herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2.					3 ft (1 m) in height.	
3.						
4.					Woody vine - All woody vines, regardless of height.	
						i
5	-		= Total Cover		Lindrambudia	
			= Total Cover	_	Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes NoX	
Remarks: (if observed, list m	norphological adaptat	ions below).			
No positive indication of buds	anhutia vagatatian uu		d (>EOO/ of dominan	t anasias inde	aved as EAC as dries)	
No positive indication of hydr	opnytic vegetation wa	as observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).	
No vegetation present.						

Depletion None Clay Cl	Depth	Matrix			Redox F	eatures			
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.	inches)	Color (moist)	<u>%</u>	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	0-20	N 3	100	None				Clay	
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)				No de la colonia			21	Daniel Indiana Market	A
Histosol (A1)							Location: PL		
Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Depleted Dark Surface (F6) Muck Presence (A8) (LRR P, T) Depleted Dark Surface (F7) 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 (F7) Mari (F10) (LRR U) Depleted Dark Surface (F7) 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) Destrictive Layer (if observed): Type: Depth (inches): Type: Depth (inches): Type: Depth (inches): Type: Depth (inches): Thin Dark Surface (S9) (LRR S, T, U) Reduced Vertic (F18) (LRR S, T, U) Reduced Vertic (F18) (MLRA 150A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Z cm Muck (A10) (LRR S) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Anomalous Bright Loamy Soil (F20) (MLRA 149A, 153C, 153D)	-		icable to all			-			
Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) Muck Presence (A8) (LRR P, T, U) Depleted Dark Surface (F6) 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 (S6) Dark Surface (S7) (LRR P, S, T, U) Depleted Dark Surface (A19) Coast Prairie Redox (A16) (MLRA 150A) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Depleted Dark Surface (B12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Destrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X		` '				, , ,			, . ,
Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, S) Sandy Redox (A5) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Depleted Matrix (F2) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF2) Wery Shallow Dark Surface (TF12) Other (Explain in Remarks) 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) Derla Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Despleted Selow Dark Surface (S7) (LRR P, S, T, U) Piedmont Floodplain Soils (F20) Mark (F2) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF2) Wery Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Detend Cohric (F11) (MLRA 151) Inon-Manganese Masses (F12) (LRR O, P, T) Jandicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Beduced Vertic (F18) (MLRA 150A), 150B) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Delta Ochric (F18) (MLRA 150A, 150B) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Detty (if observed): Type: Depth (inches): Hydric Soil Present? Yes NoX	Histic E	pipedon (A2)							
Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Pedeted Matrix (F3) Organic Bodies (A6) (LRR P, T, U) Som Mucky Mineral (A7) (LRR P, T, U) Pepleted Dark Surface (F6) Muck Presence (A8) (LRR U) Pepleted Dark Surface (F7) Pepleted Dark Surface (F7) Pepleted Below Dark Surface (A11) Pepleted Below Dark Surface (A11) Pepleted 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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Pepleted Ochric (F11) (MLRA 150A, 150B) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D) Pepleted Ochric (F10) (LRR P, T, U) Petermore Managanese Masses (F12) (LRR P, T, U) Peleta Ochric (F17) (MLRA 151) Sandy Mucky Mineral (S1) (LRR O, S) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Petermore Managanese Masses (F12) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Petermore Managanese Masses (F12) (LRR P, T, U) Petermore Managan	Black H	listic (A3)		Loamy	Mucky Mii	neral (F1) (LRR	? O)	Reduced Vert	ic (F18) (outside MLRA 150A ,
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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Redox Dark Surface (F6) Med (AFR P, T, U) Marl (F10) (LRR U) Depleted Dark Surface (F7) Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Trick Dark Surface (A12) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F13) (MLRA 151) Reduced Vertic (F18) (MLRA 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	Hydroge	en Sulfide (A4)		Loamy	Gleyed Ma	atrix (F2)		Piedmont Floo	odplain Soils (F19) (LRR P, S, 1
5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, T, U) Depleted Dark Surface (F7) Redox Depressions (F8) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Jindicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Delta Ochric (F17) (MLRA 151) Sandy Redox (S5) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	Stratifie	d Layers (A5)		Deplete	ed Matrix (F3)		Anomalous B	ight Loamy Soils (F20)
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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Destrictive Layer (if observed): Type: Depth (inches): Marl (F10) (LRR U) Marl (F10) (LRR U) Other (Explain in Remarks)	Organic	Bodies (A6) (LRR	P, T, U)	Redox	Dark Surfa	ace (F6)		(MLRA 153B)	1
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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Destrictive Layer (if observed): Type: Depth (inches): Marl (F10) (LRR U) Marl (F10) (LRR U) Other (Explain in Remarks)	5 cm M	ucky Mineral (A7) (L	.RR P, T, U)	 Deplete	d Dark Su	urface (F7)		Red Parent M	aterial (TF2)
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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Destrictive Layer (if observed): Type: Depth (inches): Type: Depth (inches): Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) 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. Method Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Destrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X									
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) Dark Surface (S7) (LRR P, S, T, U) Dark Surface (S7) (LRR P, S, T, U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Wetland hydrology must be present, unless disturbed or problematic. 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) Dark Surface (S7) (LRR P, S, T, U) Destrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Demarks:					-				
Thick Dark Surface (A12)					, ,	•	51)	\$ (Explain	
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) Restrictive Layer (if observed): Type: Depth (inches): Delta Ochric (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. Method Number (F13) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Method Number (F13) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Method Number (F13) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Method Number (F13) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Method Number (F13) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Method Number (F13) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Method Number (F15) (MLRA 150A, 150B) Wetland hydrology must be present, unless disturbed or problematic. Method Number (F15) (MLRA 150A, 150B) Method Number (F15) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Wetland hydrology must be present, unless disturbed or problematic. Method Number (F15) (MLRA 150A, 150B) Method Number (F15)			(' ' ')				-	³ Indicators	of hydrophytic vegetation and
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) Restrictive Layer (if observed): Type: Depth (inches): Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Reduced Vertic (F18) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Hydric Soil Present? Yes NoX		, ,	(MI DA 1504)		•	, ,			, , , ,
Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X 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 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) Destrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X		. , ,	(LKK U, 3)				0A 4E0P\		
Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Destrictive Layer (if observed): Type: Depth (inches): No X Demarks:		. , ,			,	, .	•		
Dark Surface (S7) (LRR P, S, T, U) Destrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Demarks:		, ,				, ,			
Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes NoX Remarks:	Stripped	d Matrix (S6)		Anoma	ous Brigh	t Loamy Soils (I	+20) (MLRA 149	A, 153C, 153D)	
	Depth (in						Hydric	Soil Present? Yes	s No X
to positive indication of hydric soils was observed.	Remarks:								
o positive indication of hydric soils was observed.									
	lo positive ii	ndication of hydric s	oils was obse	erved.					

Project/Site:	Bluewater SPM	County:	Nueces	Sampling Date:	February 5, 2019
Applicant/Owner:	Lloyd Engineering	Stat			•
	ey and N. Trivino	Section, Township	o, Range:	 N/A	<u>-</u>
Landform (hillslope, terrace, etc.):		Local relief (conca	ave, convex, none)	: None Slope	(%): 0-5
0.1 : (1.00 141.04)	None	_			atum: North American Datum 1983
Soil Map Unit Name:	Tidal flats, occasionally	y ponded		WI Classification:	E2USN
Are climatic / hydrologic conditions	on the site typical for this time of year?	(Yes / No)	YES (if	no, explain in Remarks.)	
Are Vegetation No ,Soil				ımstances" present? Yes	x No
Are Vegetation No ,Soil	No ,or Hydrology No natu	rally problematic?	(If need	led, explain any answers in	Remarks.)
SLIMMARY OF FINDINGS	S - Attach site map showing	sampling poin	t locations t	ransocts important	t fastures etc
		Samping poin	it locations, ti	ansects, important	r reatures, etc.
Hydrophytic Vegetation Present?	Yes <u>X</u> No	_			
Hydric Soil Present?	Yes <u>X</u> No		led Area		
Wetland Hydrology Present?	Yes <u>X</u> No	_ within a We	tland?	Yes X No	·
Remarks: This point was determined to l	be within a wetland due to the presence	of all 3 wetland crite	ria.		
HYDROLOGY					
Wetland hydrology Indicato	rs:		Se	econdary Indicators (minimu	um of two required)
Primary Indicators (minimum o	of one is required; check all that apply)			Surface Soil Cracks (B	6)
Surface Water (A1)	Aquatic Faun	na (B13)		Sparsely Vegetated Co	oncave Surface (B8)
X High Water Table (A2)	Marl Deposits	s (B15) (LRR U)		Drainage Patterns (B1	0)
Saturation (A3)	Hydrogen Su	ılfide Odor (C1)		Moss Trim Lines (B16)	
Water Marks (B1)	Oxidized Rhiz	zospheres on Living	Roots(C3)	Dry-Season Water Tab	ole (C2)
Sediment Deposits (B2)	Presence of !	Reduced Iron (C4)		Crayfish Burrows (C8)	
Drift Deposits (B3)	Recent Iron F	Reduction in Tilled S	oils (C6)	Saturation Visible on A	erial Imagery (C9)
Algal Mat or Crust (B4)	Thin Muck St	urface (C7)		Geomorphic Position (I	D2)
Iron Deposits (B5)	Other (Explai	in in Remarks)		Shallow Aquitard (D3)	
Inundation Visible on A	erial Imagery (B7)		_>	FAC-Neutral Test (D5)	
Water-Stained Leaves	(B9)			Sphagnum moss (D8)	(LRR T, U)
			I		
Field Observations:					
	NoX Depth (inch	· ——			
Water Table Present? Yes	' ' '				
Saturation Present? Yes (includes capillary fringe)	NoX Depth (inch	nes): <u>>20</u>	Wetland Hydrol	ogy Present? Yes	X No
	eam gauge, monitoring well, aerial photos	s, previous inspection	ns), if available:		
Remarks:					
Tromanie.					
A positive indication of wetland	d hydrology was observed (at least one բ	primary indicator).			

		Absolute	Dominant	Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size:	30 ft /	% cover	Species?	Status	Number of Dominant Species		
1 Name Observed		70 00 001	Орсоюз:	Otatus	That Are OBL, FACW, or FAC:	1	(\(\)
					That Are OBE, I ACW, OI I AC.		(A)
2					T		
3					Total Number of Dominant		
4					Species Across All Strata:	1	(B)
5							
6					Percent of Dominant Species		
		0	= Total Cover		That Are OBL, FACW, or FAC:	100%	(A/B)
	50% of total cover:	0	20% of total cover:	0			
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:		
1. None Observed			<u> </u>		Total % Cover of:	Multiply by:	
2					OBL species100	_ x 1 = 100	
3.					FACW species 0	x 2 = 0	
4.			·		FAC species 0	x 3 = 0	
5.		-			FACU species 0	x 4 = 0	
6.					UPL species 0	x 5 = 0	
·-			= Total Cover		Column Totals: 100	(A) 100	(B)
	50% of total cover:		20% of total cover:	Ω	- 100 - 100		(5)
Shrub Stratum (Plot size:			2070 OI LOLAI COVEI.		Prevalence Index = B/A	= 1.00	
1. None Observed	<u> </u>				r revalence index – D/A		
					Hydrophytic Vegetation Indica	tore:	
2.							
3.					1 - Rapid Test for Hydro		
4	_				X 2 - Dominance Test is >		
5			<u> </u>		X 3 - Prevalence Index is		
6					Problematic Hydrophyti	c Vegetation' (Explain))
			= Total Cover				
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and we	etland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or p	oroblematic.	
Avicennia germinans		100	Yes	OBL	Definitions of Five Vegetation	Strata:	
2			. <u> </u>		Tree - Woody plants, excluding	woody vines,	
3			. <u> </u>		approximately 20 ft (6m) or more	in height and 3 in.	
4					(7.6 cm) or larger in diameter at	breast height (DBH).	
5							
6.					Sapling - Woody plants, excludi	ng woody vines,	
7.					approximately 20 ft (6 m) or more	e in height and less	
8.					than 3 in. (7.6 cm) DBH.		
9.							
10.			<u></u>		Shrub - Woody plants, excluding	g woody vines,	
11.		-			approximately 3 to 20 ft (1 to 6 n	n) in height.	
		100	= Total Cover				
	50% of total cover:		•	20	Herb - All herbaceous (non-woo	dy) plants, including	
Woody Vine Stratum (Plot size:			2070 01 total 00001.		herbaceous vines, regardless of	size, and woody	
1. None Observed					plants, except woody vines, less	than approximately	
					3 ft (1 m) in height.		
					, ,		
3	<u> </u>				Woody vine - All woody vines, r	egardless of height	
4					Traces, time , in mean, times, t		
5			= Total Cavar		Usalranhistia		
	F00/ -f4-4-1		= Total Cover	0	Hydrophytic		
	50% of total cover:	0	20% of total cover:	0	Vegetation		
					Present? Yes X	_ No	
Remarks: (if observed, list mo	orphological adaptat	ions below).				
A positive indication of hydrop	hytic vegetation was	s observed	(>50% of dominant	species index	ed as OBL, FACW, or FAC).		
A positive indication of hydrop	hytic vegetation was	sobserved	(Prevalence Index is	s ≤ 3.00).			
, .	-			•			

0-3	Depth (inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Type: C=Concentration, D=Depletion file for polymentic Soils (F19) (LRR P, T, U) Type: C=Concentration, D=Depletion file for polymentic Soils (F19) (LRR P, T, U) Type: C=Concentration, D=Depletion file for polymentic Soils (F19) (RMRA 149A, 153C, 153D) Type Matrix (S6) Dark Surface (S1) (LRR P, T, U) Depletion file object of problematic. Type: C=Concentration, D=Depletion file for polymentic Soils (F19) (MLRA 149A, 153C, 153D) Type: C=Concentration, D=Depletion file for polymentic Soils (F19) (MLRA 149A, 153C, 153D) Type Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Type: Depth (inches):									
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) Polyvalue Below Surface (F18) (LRR O) Polyvalue Below Surface (F18) (outside MLRA 150A, 150A) Polyvalue Below Surface (F18) (outside MLRA 150A, 150A) Polyvalue Below Surface (F19) (LRR P, S, 140 (LRR P, S,					2	С	PL		
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) Polyvalue Below Surface (F18) (LRR O) Polyvalue Below Surface (F18) (outside MLRA 150A, 150A) Polyvalue Below Surface (F18) (outside MLRA 150A, 150A) Polyvalue Below Surface (F19) (LRR P, S, 140 (LRR P, S,									
Histic Epipedon (A2) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, 1) Reduced Vertic (F18) (outside MLRA 150A, 150A, 151A) Piedmont Floodplain Soils (F19) (LRR P, S, 1) Reduced Vertic (F18) (outside MLRA 150A, 150A, 151A) Reduced Vertic (F18) (outside MLRA 150A, 150A, 151A) Reduced Vertic (F18) (outside MLRA 150A, 150A, 151A,				II LRRs, unless of	herwise n	oted.)		Indicators for Probl	ematic Hydric Soils ³ :
Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A6) Organic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR P, T, U) Depleted Dark Surface (F7) Muck Presence (A8) (LRR P, T) Depleted Dark Surface (F8) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) X Sandy Redox (S5) Dark Surface (S7) Detendor Teodor (F10) (MLRA 150A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No		, ,				, , ,	· · · · · ·		
Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Depleted Matrix (F2) Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F6) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Mari (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) X Sandy Redox (S5) Deta Ochric (F17) (MLRA 151) Deta Ochric (F18) (MLRA 150A, 150B) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Piedmont Floodplain Soils (F19) (LRR P, S, T, U) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Redox Dark Surface (F7) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No		,					· ·		
Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Some 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) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Mucky Mineral (S1) (LRR O, S) Stripped Matrix (S6) Depleted Dark Surface (A15) Depleted Dark Surface (A16) Marl (F10) (LRR U) Depleted Dark Surface (F7) Red Parent Material (TF2) Nerd Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Depleted Obcric (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) Stripped Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:		` '			-		(O)		, , ,
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 (F13) (MLRA 151) Unless disturbed or problematic. X Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:		, ,			-				
5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) X Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Dark Surface (S7) (LRR P, T, U) Depleted Dark Surface (F12) Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Delta Ochric (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (LRR O, P, T) Jandicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. X Sandy Gleyed Matrix (S4) Reduced (F12) Very Shallow Dark Surface (F12) Other (Explain in Remarks) Jandicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Method of the present of		• • •			,	,			ht Loamy Soils (F20)
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) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. X Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) X Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) X Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:		, , ,				` '			: 1 (TEO)
1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A12) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) X Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Wetland hydrology must be present, unless disturbed or problematic. Iron-Manganese Masses (F12) (LRR O, P, T) Wetland 1, Type: Depth (inches): Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) 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. Mark (F10) (LRR P, T, U) Wetland 1, Type: Depth (inches): Hydric Soil Present? Yes X No No		, , ,		· — ·		` '			` '
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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Iron-		` , ,	•		•	` '		·	` ,
Thick Dark Surface (A12)		, , , .				· ·	E4\	Other (Explain I	n Remarks)
Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) X Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Delta Ochric (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. Meduced Vertic (F18) (MLRA 150A, 150B) Reduced Vertic (F18) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No			ce (ATT)		`	, ,	,	³ Indicators of	hydronhytic vegetation and
Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No No Mucky Mineral (S1) (LRR O, S) Reduced Vertic (F18) (MLRA 150A, 150B) Reduced Vertic (F18) (MLRA 149A) Field mont Floodplain Soils (F20) (MLRA 149A, 153C, 153D) Hydric Soil Present? Yes X No		,	MI RA 150		•	, , ,			, , , ,
X Sandy Gleyed Matrix (S4)		, ,	-	· —	,	, ,	, 0,	unless disturb	ped or problematic.
X Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D) Piedmont Floodplain Floodplai			(21111 0, 0)		,		0A 150B)		
Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No		. , ,			,		· ·		
Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:		, ,			-	, ,	-	9A. 153C. 153D)	
Type: Hydric Soil Present? YesX No Remarks:		` ,	S, T, U)			(.		,,	
Depth (inches): Hydric Soil Present? YesX No	Restrictive	Layer (if observed)	:						
Depth (inches): Hydric Soil Present? YesX No	Type:								
		ches):					Hydrid	Soil Present? Yes _	X No
	Damaukai								
A positive indication of hydric soil was observed.									
	A positive in	dication of hydric soi	l was obse	rved.					

Project/Site:		Bluewater SPM		County:	Nueces	Sampling	Date: F	ebruary 5, 2019
Applicant/Owner:		Lloyd Engin	eering	Sta			Point:	
Investigator(s):	C. Bailey	y and		Section, Townshi		<u> </u>	N/A	
Landform (hillslope, ter				Local relief (conc	ave, convex, no	ne): None	Slope (%):	0-5
Subregion (LRR or ML				Lat:27.8	62538 Lo	ong: -97.080890	0 Datum	I: North American Datum 1983
Soil Map Unit Name:		ljam	clay loam, rarely f	flooded		NWI Classification:		E2USP
Are climatic / hydrologi	c conditions o	n the site typical for th	nis time of year?	(Yes / No)	YES	(if no, explain in Re	marks.)	
Are Vegetation	No,Soil_	,or Hydrolog	y No signit	ficantly disturbed?	Are "Normal C	ircumstances" prese	nt? Yes	X No
Are Vegetation	No,Soil_	or Hydrology,	y <u>No</u> natur	rally problematic?	(If ne	eeded, explain any a	nswers in Rer	marks.)
SUMMARY OF F	INDINGS	- Attach site ma	ap showing s	sampling poir	it locations	, transects, im	portant fe	atures, etc.
								·
Hydrophytic Vegetation	n Procent?	Yes	NoX					
Hydric Soil Present?	II FIESCIII!	YesX	No X		alad Araa			
Wetland Hydrology P	resent?	Yes X	No	within a We		Yes	No	x
Wedana Hydrology i	COCIT:	103 <u>X</u>		Within a vic	tiuriu .	103		
Remarks:								
	tarminad not t	e he within a watland	due to the leak of	budrophytic vogete	ation.			
i nis point was de	ermined not to	o be within a wetland	due to the lack of	nydropnytic vegeta	tion.			
HYDROLOGY								
Wetland hydrolo	gy Indicators	::				Secondary Indicator	rs (minimum c	of two required)
Primary Indicators	(minimum of	one is required; check	k all that apply)			Surface Soil (Cracks (B6)	
X Surface Wa	iter (A1)	_	Aquatic Fauna	a (B13)		Sparsely Veg	etated Conca	ve Surface (B8)
High Water	Table (A2)	_	Marl Deposits	(B15) (LRR U)		Drainage Pat	terns (B10)	
Saturation	A3)		Hydrogen Sul	fide Odor (C1)		Moss Trim Lir	nes (B16)	
Water Marl	s (B1)		Oxidized Rhiz	ospheres on Living	Roots(C3)	Dry-Season V	Nater Table (C2)
Sediment D	eposits (B2)		Presence of F	Reduced Iron (C4)		Crayfish Burr	ows (C8)	
Drift Depos	. , ,		— Recent Iron R	teduction in Tilled S	Soils (C6)		, ,	I Imagery (C9)
	r Crust (B4)		— Thin Muck Su		,	Geomorphic I		5 , (,
Iron Depos		_	— Other (Explair	, ,		Shallow Aquit		
		ial Imagery (B7)		,,		FAC-Neutral		
	ned Leaves (B					Sphagnum m		RT III
	104 204700 (2	٥,				Opinagnam m	000 (20) (211	(1, 0)
Field Observations:								
Surface Water Prese	nt? Yes _	X No	Depth (inch	es): 2				
Water Table Present		No X		es): >20				
Saturation Present?	Yes	No X	Depth (inch	es): >20	Wetland Hyd	rology Present?	Yes X	No
(includes capillary frin	ge)							
Describe Recorde	d Data (strear	m gauge, monitoring v	vell, aerial photos,	previous inspectio	ns), if available:			
Remarks:								
A positive indicati	an af watland	budrologu waa abaan	ad (at least one n	riman, indicator)				
A positive indicati	on or wetland	hydrology was observ	red (at least one p	rimary indicator).				

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
To a Object way (District	00 (1)					
Tree Stratum (Plot size:	<u>30 ft.</u>)	% cover	Species?	Status	Number of Dominant Species	
					That Are OBL, FACW, or FAC:	(A)
2						
3			. <u> </u>		Total Number of Dominant	
4					Species Across All Strata: 0	(B)
5						
6.					Percent of Dominant Species	
			= Total Cover		•	(A/B)
	50% of total cover:		20% of total cover:	0		(,,,,,
Conling Stratum (Diet size)			20% of total cover.		Prevalence Index Worksheet:	
Sapling Stratum (Plot size:	30 ft.)					
1. None Observed					Total % Cover of: Multiply by:	_
2					OBL species 0 x 1 = 0	_
3					FACW species 0 x 2 = 0	_
4					FAC species 0 x 3 = 0	
5					FACU species 0 x 4 = 0	
6			<u> </u>		UPL species 0 x 5 = 0	
		0	= Total Cover		Column Totals: 0 (A) 0	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:			•		Prevalence Index = B/A = N/A	
	,					_
					Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
4					2 - Dominance Test is >50%	
5					3 - Prevalence Index is ≤ 3.0 ¹	
6					Problematic Hydrophytic Vegetation ¹ (Explain)	
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
1. None Observed					Definitions of Five Vegetation Strata:	
2					Tree - Woody plants, excluding woody vines,	
3.			·		approximately 20 ft (6m) or more in height and 3 in.	
4.					(7.6 cm) or larger in diameter at breast height (DBH).	
				-	(1.10 d.1.) or larger in alameter at 2.10det 110.gm (22.1.).	
5					Sapling - Woody plants, excluding woody vines,	
6				-	approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8.					than 3 in. (7.0 cm) DDH.	
9					Charle Manda alama arrabadian manda di man	
10					Shrub - Woody plants, excluding woody vines,	
11					approximately 3 to 20 ft (1 to 6 m) in height.	
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:	30 ft.)				herbaceous vines, regardless of size, <u>and</u> woody	
1. None Observed			<u> </u>		plants, except woody vines, less than approximately	
2					3 ft (1 m) in height.	
3.						
4.					Woody vine - All woody vines, regardless of height.	
5.						j
		0	= Total Cover	-	Hydrophytic	
	50% of total cover:		20% of total cover:	0	Vegetation	
	30 % Of total cover.		2070 Of total cover.		_	
					Present? Yes NoX	
5			.			
Remarks: (if observed, list mo	orphological adaptat	ions below).			
No positive indication of hydro	phytic vegetation wa	as observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).	
•				•		
No vegetation present.						
G						

Profile Descrip	-	to the depth	needed to doc			onfirm the abs	sence of indicators.)	
Depth -	Matrix			Redox F		. 2		
(inches)	Color (moist)		Color (moist)	<u> </u>	Type ¹	Loc ²	Texture	Remarks
0-20	N 4	100	None				Sandy Clay Loam	
	_							
¹ Type: C=Cond	entration, D=Dep	oletion, RM=R	educed Matrix, N	1S=Maske	d Sand Grains.	² Location: F	L=Pore Lining, M=Matri	x.
	dicators: (Appl						Indicators for Probl	ematic Hydric Soils ³ :
Histosol (A					Surface (S8) (L	PP S T III	1 cm Muck (A9)	•
	•				, , ,			
Histic Epip					e (S9) (LRR S,	· ·	2 cm Muck (A10	
Black Hist	ic (A3)		Loamy	Mucky Mir	neral (F1) (LRR	R O)	Reduced Vertic	(F18) (outside MLRA 150A,B)
Hydrogen	Sulfide (A4)		X Loamy	Gleyed Ma	atrix (F2)		Piedmont Flood	plain Soils (F19) (LRR P, S, T)
Stratified L	ayers (A5)		Deplete	ed Matrix (F3)		Anomalous Brig	ht Loamy Soils (F20)
	odies (A6) (LRR I	P T II)		Dark Surfa	•		(MLRA 153B)	, ,
	, , ,	· · · · ·			` '			orial (TE2)
	(A2) (L	· · · · · ·			ırface (F7)		Red Parent Mat	
	sence (A8) (LRR	-		Depressio	` ,			ark Surface (TF12)
1 cm Mucl	(A9) (LRR P, T)		Marl (F	10) (LRR I	U)		Other (Explain i	n Remarks)
Depleted E	Below Dark Surfa	ce (A11)	Deplete	ed Ochric (F11) (MLRA 1	51)		
—— Thick Darl	Surface (A12)		Iron-Ma	anganese I	Masses (F12)	(LRR O. P. T)	³ Indicators of	hydrophytic vegetation and
	rie Redox (A16)	MI RA 150A)		-	F13) (LRR P, T		wetland hydro	ology must be present,
	• ,	•		•	, .	, 0,	unless disturb	ped or problematic.
	cky Mineral (S1)	(LKK U, 3)			') (MLRA 151)			
	yed Matrix (S4)				=18) (MLRA 15			
Sandy Red	dox (S5)		Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A)		
Stripped M	latrix (S6)		Anoma	lous Bright	t Loamy Soils (I	F20) (MLRA 14	9A, 153C, 153D)	
— Dark Surfa	ace (S7) (LRR P,	S T III						
Type: _ Depth (inche						Hydri	c Soil Present? Yes _	X No
							_	
Remarks:								
A positivo india	ation of budrio oci	l was absorve	. d					
A positive indica	ation of hydric soi	i was observe	a.					

Project/Site:	Bluewater SPM	County:	Nueces	s Samplii	ng Date: February 5,	2019
Applicant/Owner:	Lloyd Engineeri		State:		e Point: DPB024 F	
Investigator(s): C. I	Bailey and N	I. Trivino Section	n, Township, Range:		N/A	
Landform (hillslope, terrace, etc		er Local r	elief (concave, convex	, none): Concave	Slope (%):	0-5
	None		27.862999		512 Datum: North Amer	rican Datum 1983
Soil Map Unit Name:		loam, rarely flooded		NWI Classification	on: E2USP	
Are climatic / hydrologic condition	ons on the site typical for this ti	me of year? (Yes /	No) YES	(if no, explain in I	Remarks.)	
Are Vegetation No,	Soil No ,or Hydrology _	No significantly d	isturbed? Are "Norma	al Circumstances" pre	sent? Yes X No	o
Are Vegetation No,	Soil No ,or Hydrology _	No naturally prob	lematic? ((If needed, explain any	answers in Remarks.)	
SUMMARY OF FINDIN	GS - Attach site map	showing sampli	ng point locatio	ns. transects. ii	mportant features.	etc.
			-			
Hydrophytic Vegetation Prese	nt? Yes X	No				
Hydric Soil Present?			the Sampled Area	V V	N.	
Wetland Hydrology Present?	Yes X	No w	ithin a Wetland?	Yes X	No	-
Remarks:						
·	to be within a wetland due to t	he presence of all 3 we	atland criteria.			
HYDROLOGY						
Wetland hydrology Indic					tors (minimum of two requ	ired)
,	um of one is required; check all	,			oil Cracks (B6)	(7 .0)
Surface Water (A1)		Aquatic Fauna (B13)	DD III)		egetated Concave Surface	∌ (B8)
X High Water Table (A	· —	Marl Deposits (B15) (L			Patterns (B10)	
Saturation (A3)		Hydrogen Sulfide Odol Oxidized Rhizospheres	, ,		Lines (B16) n Water Table (C2)	
Water Marks (B1) Sediment Deposits (Presence of Reduced	- , ,		urrows (C8)	
Drift Deposits (B3)	· · · —	Recent Iron Reduction	, ,		Visible on Aerial Imagery ((C0)
Algal Mat or Crust (I		Thin Muck Surface (C)	, ,		ic Position (D2)	,03)
Iron Deposits (B5)	· —	Other (Explain in Remain	•		quitard (D3)	
	n Aerial Imagery (B7)	Other (Explain in Nemi	arko)	X FAC-Neutr	. , ,	
Water-Stained Leav	, ,				moss (D8) (LRR T, U)	
Water Stamed Eday	00 (20)				(20) (21111 1; 3)	
Field Observations:						
Surface Water Present? Y	/es NoX	Depth (inches):	N/A			
Water Table Present?	res X No	Depth (inches):	2			
	/es NoX	Depth (inches):	>20 Wetland I	Hydrology Present?	Yes <u>X</u> No	
(includes capillary fringe)						
Describe Recorded Data (stream gauge, monitoring well,	aerial photos, previous	inspections), if availal	ble:		
Remarks:						
Remarks.						
A positive indication of we	tland hydrology was observed (at least one primary in	dicator).			
Aquatic Fauna: crabs.						

		Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:	30 ft)	% cover	Species?	Status	Number of Dominant Species
4 44 64 4		70 00 001	ореоюз:	Otatus	That Are OBL, FACW, or FAC: 1 (A)
					That Ale Obe, I Aow, of I Ao.
2					Total Number of Deminent
3.					Total Number of Dominant
4					Species Across All Strata:1 (B)
5					
6					Percent of Dominant Species
			= Total Cover		That Are OBL, FACW, or FAC: (A/B)
	50% of total cover:	0	20% of total cover:	0	Prevalence Index Worksheet:
Sapling Stratum (Plot size:	30 ft.)				
					Total % Cover of: Multiply by:
2					OBL species 100 x 1 = 100
3					FACW species 0 x 2 = 0
4					FAC species 0 x 3 = 0
5					FACU species 0 x 4 = 0
6			·		UPL species 0 x 5 = 0
		0	= Total Cover		Column Totals: (A) (B)
	50% of total cover:	0	20% of total cover:	0	
Shrub Stratum (Plot size:	30 ft)				Prevalence Index = B/A = 1.00
1. None Observed	·				
2.					Hydrophytic Vegetation Indicators:
3.					1 - Rapid Test for Hydrophytic Vegetation
4.					X 2 - Dominance Test is >50%
5.					X 3 - Prevalence Index is ≤ 3.0 ¹
					Problematic Hydrophytic Vegetation ¹ (Explain)
6	-		= Total Cover		Troblematic Hydrophytic Vegetation (Explain)
	FOO/ of total acuser			0	1 Indicators of hydric cail and watland hydrology must
Harle Christian (Diet sies)	50% of total cover:		20% of total cover:	0	Indicators of hydric soil and wetland hydrology must
Herb Stratum (Plot size:		400	V.	OBL	be present, unless disturbed or problematic.
		100	<u>Yes</u>	OBL_	Definitions of Five Vegetation Strata:
2.					Tree - Woody plants, excluding woody vines,
3					approximately 20 ft (6m) or more in height and 3 in.
4					(7.6 cm) or larger in diameter at breast height (DBH).
5					
6					Sapling - Woody plants, excluding woody vines,
7					approximately 20 ft (6 m) or more in height and less
8					than 3 in. (7.6 cm) DBH.
9					
10			-		Shrub - Woody plants, excluding woody vines,
11					approximately 3 to 20 ft (1 to 6 m) in height.
		100	= Total Cover		
	50% of total cover:	50	20% of total cover:	20	Herb - All herbaceous (non-woody) plants, including
Woody Vine Stratum (Plot size:	30 ft.)				herbaceous vines, regardless of size, <u>and</u> woody
1. None Observed					plants, except woody vines, less than approximately
2.					3 ft (1 m) in height.
3.					
4.	-				Woody vine - All woody vines, regardless of height.
5	<u> </u>				
			= Total Cover		Hydrophytic
	50% of total cover:		20% of total cover:	0	Vegetation
	30 % of total cover.		20 % Of total cover.		
					Present? Yes <u>X</u> No
Demorks: //f -k1 !! /	ornhological alter of	iono balar	<u> </u>		-
Remarks: (if observed, list mo	orphological adaptat	ions below).		
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	species index	xed as OBL, FACW, or FAC).
	-				
A positive indication of hydrop	hytic vegetation was	observed	(Prevalence Index is	s ≤ 3.00).	
				,	

Depth	Matrix				Features			
inches)	Color (moist)	<u>%</u>	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks
0-3	2.5Y 5/1	<u>100</u>	None None				Sandy Loam	
3-20	N 4	_98_	10YR_5/4_	_2_	C	PL	Sandy Loam	
	oncentration, D=Dep		-Paduand Matrix		d Sand Crains	2l continu	L=Pore Lining, M=Matrix	,
	s Indicators: (Appl					Location. P		ematic Hydric Soils ³ :
Histoso	`	100010 10 0	•		Surface (S8) (L	RRSTII)	1 cm Muck (A9)	•
	Epipedon (A2)				e (S9) (LRR S ,		2 cm Muck (A10	
	Histic (A3)				neral (F1) (LRR			(F18) (outside MLRA 150A ,
	en Sulfide (A4)			/ Gleyed M	, , ,	. •,		plain Soils (F19) (LRR P, S,
· ·	ed Layers (A5)			ted Matrix (, ,			nt Loamy Soils (F20)
	c Bodies (A6) (LRR	P. T. U)		Dark Surf	,		(MLRA 153B)	20ay 000 (1 20)
	lucky Mineral (A7) (L				urface (F7)		Red Parent Mate	erial (TF2)
	Presence (A8) (LRR			Depression	` ,			ark Surface (TF12)
 1 cm M	luck (A9) (LRR P, T)	,	—— Marl (I	F10) (LRR	U) É		Other (Explain ir	` ,
— Deplete	ed Below Dark Surfa	ce (A11)			(F11) (MLRA 1	51)		,
Thick D	Dark Surface (A12)	, ,	Iron-M	langanese	Masses (F12)	(LRR O, P, T)	³ Indicators of	hydrophytic vegetation and
Coast F	Prairie Redox (A16)	(MLRA 150	OA) Umbri	c Surface (F13) (LRR P, T	, U)		logy must be present,
—— Sandy	Mucky Mineral (S1)	(LRR O, S)			7) (MLRA 151)		unless disturb	ed or problematic.
X Sandy	Gleyed Matrix (S4)		Reduc	ed Vertic (F18) (MLRA 15	0A, 150B)		
X Sandy	Redox (S5)		Piedm	ont Floodp	lain Soils (F19)	(MLRA 149A)		
Strippe	d Matrix (S6)		Anoma	alous Brigh	it Loamy Soils (I	F20) (MLRA 14	9A, 153C, 153D)	
Dark S	urface (S7) (LRR P,	S, T, U)						
Restrictive	Layer (if observed)							
	Layor (ii oboorvou)							
Type: Depth (in						Hydri	c Soil Present? Yes	X No
Deptil (iii						liyan	C Son Fresent: Tes_	NO
Remarks:								
veillaiks.								
A positive in	dication of hydric so	il was obse	rved.					

Project/Site:	Е	Bluewater SPM		С	County:	Nueces	S	Sampling I	Date: F	ebruary 5, 2019
Applicant/Owner:			ngineering		Sta		Texas		oint:	•
Investigator(s):	C. Bailey	and	N. Tri	vino S	Section, Townshi	p, Range: _			N/A	
Landform (hillslope, terrace,	etc.):	В	each	L	ocal relief (conc	ave, convex	, none): _	None	Slope (%)	0-5
Subregion (LRR or MLRA):		N	lone		Lat:27.8	862947	Long: _	-97.080559	Datun	1: North American Datum 1983
Soil Map Unit Name:			jam clay loa					Classification:		E2USP
Are climatic / hydrologic con					(Yes / No)			explain in Ren	,	
		No ,or Hydro			antly disturbed?			· ·		
Are Vegetation No	,Soil	No ,or Hydro	ology No	naturall	ly problematic?	((If needed,	explain any ar	nswers in Re	marks.)
SUMMARY OF FIND	INGS -	Attach site	map sho	owing sa	mpling poir	nt locatio	ns, tran	sects, imp	ortant fe	atures, etc.
Hydrophytic Vegetation Pro	esent?	Yes	No _	X						
Hydric Soil Present?		Yes			Is the Samp	oled Area				
Wetland Hydrology Preser	t?	Yes			within a We	etland?	Υ	'es	No_	X
								· · · · · · · · · · · · · · · · · · ·		
Remarks:										
This point was determi	ned not to	be within a wetl	and due to tl	ne lack of all	three wetland c	riteria.				
This point was acternia	ned not to	be within a wet	una auc to ti	ic lack of all	tillee wettand of	ntona.				
111/77701.001/										
HYDROLOGY Wetland hydrology In	dicatore:									
		:	hlll 4h -4					-	-	of two required)
Primary Indicators (min		ne is required, d			D42)			Surface Soil C	, ,	ova Curfago (DO)
Surface Water (/ High Water Tabl				atic Fauna (l L Deposits <i>(</i> E	B15) (LRR U)			Drainage Patt		ave Surface (B8)
Saturation (A3)	e (A2)				e Odor (C1)			Moss Trim Lin		
Water Marks (B	1)			-	pheres on Living	Roots(C3)		Dry-Season W		C2)
Sediment Depos	•				duced Iron (C4)	110013(00)		Crayfish Burro		02)
Drift Deposits (B					luction in Tilled S	Soils (C6)		-		l Imagery (C9)
Algal Mat or Cru	,			Muck Surfa		Joo (00)		Geomorphic F		age. y (00)
Iron Deposits (B				er (Explain ir				Shallow Aquit	, ,	
Inundation Visibl	•	I Imagery (B7)		\	,			FAC-Neutral 1	, ,	
Water-Stained L								Sphagnum mo		R T, U)
	•	•							. , ,	
Field Observations:										
Surface Water Present?	Yes	No	X De	epth (inches): N/A					
Water Table Present?	Yes	No	X De	epth (inches): >20					
Saturation Present?	Yes	No	X De	epth (inches): >20	Wetland	Hydrology	Present?	Yes	NoX
(includes capillary fringe)										
Describe Recorded Da	ta (stream	gauge, monitori	ng well, aeri	al photos, pi	revious inspectio	ns), if availa	ble:			
Remarks:										
No positive indication of	of wetland	hydrology was o	heerved							
No positive indication c	n welland	nydrology was o	baci ved.							

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft \	% cover	Species?	Status	Number of Dominant Species	
4 44 64 4			Оресіез:	Otatus	·	/A\
					That Are OBL, FACW, or FAC:	(A)
2						
3					Total Number of Dominant	
4					Species Across All Strata: 0	(B)
5						
6					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC:	(A/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1. None Observed	·				Total % Cover of: Multiply by:	Ì
2.					OBL species 0 x 1 = 0	
3.				-	FACW species 0 x 2 = 0	_
					FAC species 0 x 3 = 0	_
4			-		· — — — — — — — — — — — — — — — — — — —	_
5						-
6					UPL species	—
			= Total Cover		Column Totals: (A) 0	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = N/A	
1. None Observed						
2.					Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
4.					2 - Dominance Test is >50%	
5.					3 - Prevalence Index is ≤ 3.0 ¹	
					Problematic Hydrophytic Vegetation ¹ (Explain)	
6			T-1-1-0		Problematic Hydrophytic vegetation (Explain)	
			= Total Cover	_	1	
		0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
1. None Observed					Definitions of Five Vegetation Strata:	
2					Tree - Woody plants, excluding woody vines,	
3					approximately 20 ft (6m) or more in height and 3 in.	
4					(7.6 cm) or larger in diameter at breast height (DBH).	
5.						
6.					Sapling - Woody plants, excluding woody vines,	
			-		approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8						
9					Shrub - Woody plants, excluding woody vines,	
10						
11					approximately 3 to 20 ft (1 to 6 m) in height.	
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size	:30 ft)				herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2.					3 ft (1 m) in height.	
3.						
4.					Woody vine - All woody vines, regardless of height.	
						i
5			= Total Cover		Lindrambudia	
			= Total Cover	_	Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes NoX	
Remarks: (if observed, list m	norphological adaptat	ions below).			
No positive indication of buds	anhutia vagatatian uu		d (>EOO/ of dominan	t anasias inda	aved as EAC as dries)	
No positive indication of hydr	opnytic vegetation wa	as observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).	
No vegetation present.						

Depth	Matrix			Redox F				
(inches)	Color (moist)	%	Color (moist)	%_	Type ¹	Loc ²	Texture	Remarks
0-20	10YR 5/1	100	None				Sandy Loam	
		_		_				
	concentration, D=De					² Location: Pl		•
Hydric Soil	s Indicators: (App	icable to a	•		,		Indicators for Proble	•
Histoso	()				Surface (S8) (L		1 cm Muck (A9) (•
	Epipedon (A2)				e (S9) (LRR S,		2 cm Muck (A10)	` '
	Histic (A3)			•	neral (F1) (LRR	0)		F18) (outside MLRA 150A,E
	gen Sulfide (A4)			Gleyed Ma	. ,		 ·	lain Soils (F19) (LRR P, S, T
	ed Layers (A5)	D T II)		ed Matrix (F	•			t Loamy Soils (F20)
	c Bodies (A6) (LRR			Dark Surfa	. ,		(MLRA 153B)	-:! (TEO)
	Mucky Mineral (A7) (I			ed Dark Su	` '		Red Parent Mate	` '
	Presence (A8) (LRR fluck (A9) (LRR P, T			Depression	. ,		Very Shallow Dar	` ,
	ed Below Dark Surfa			F10) (LRR (ad Ochric (5) F11) (MLRA 1 !	:1)	Other (Explain in	Remarks)
	oark Surface (A12)	ice (ATT)		`	Masses (F12) (,	³ Indicators of h	ydrophytic vegetation and
	Prairie Redox (A16)	(MI RΔ 150		•	F13) (LRR P, T			ogy must be present,
	Mucky Mineral (S1)		· —	,) (MLRA 151)	, 0,	unless disturbe	ed or problematic.
	Gleyed Matrix (S4)	(2.1.1.0,0		,	7 (MLRA 15 18) (MLRA 15	0A. 150B)		
	Redox (S5)			•	ain Soils (F19)	•		
	ed Matrix (S6)			•	, ,	•	A, 153C, 153D)	
	urface (S7) (LRR P,	S, T, U)		3	, ,		,,,	
Restrictive	Layer (if observed)):						
Type:								
Depth (ir	nches):					Hydric	Soil Present? Yes	No X
Remarks:						·		
No positive	indication of hydric s	oils was ob	served.					

Project/Site:	Bluewater SPM	Co	unty:	Nueces	Sai	mpling Date:	February 5, 2019
Applicant/Owner:	Lloyd Engineer		State			mple Point:	•
• • • • • • • • • • • • • • • • • • • •	, ,		ection, Township	, Range:		N/A	
Landform (hillslope, terrace, et			ocal relief (conca	ve, convex, no	ne): Cond	ave Slope ((%): 0-5
Subregion (LRR or MLRA):						080464 Da	atum: North American Datum 1983
Soil Map Unit Name:		y loam, rarely flood	_		NWI Classifi		E2USP
Are climatic / hydrologic condit	tions on the site typical for this t	time of year? (res / No)	YES	- (if no, explair	in Remarks.)	
Are Vegetation No	,Soil No ,or Hydrology	No significar	ntly disturbed?	Are "Normal C	ircumstances'	present? Yes	X No
Are Vegetation No	,Soil No ,or Hydrology	No naturally	problematic?	(If ne	eeded, explair	any answers in	Remarks.)
SUMMARY OF FINDIN	NGS - Attach site map	showing san	nnlina noin	locations	transacte	imnortant	features etc
- COMMINANT OF THE	- Attach Site map	Jilowing Juli	inplining point		, transcott	s, important	, routures, etc.
Hydrophytic Vegetation Prese	ent? Yes X	No					
Hydric Soil Present?	YesX	No	Is the Sampl	ed Area			
Wetland Hydrology Present?	YesX	No	within a Wet	land?	Yes	X No)
Remarks: This point was determine	d to be within a wetland due to	the presence of all	l 3 wetland criter	ia.			
HYDROLOGY Wetland by drales yetland							
Wetland hydrology Indi						,	um of two required)
	num of one is required; check al					e Soil Cracks (B	•
Surface Water (A1	· . —	Aquatic Fauna (B	•				oncave Surface (B8)
X High Water Table ((A2)	Marl Deposits (B1				ge Patterns (B10	•
Saturation (A3)		Hydrogen Sulfide	, ,	D t. (00)		Frim Lines (B16)	
Water Marks (B1)	(Ta)	Oxidized Rhizosp	_	Roots(C3)		ason Water Tab	ile (C2)
Sediment Deposits	· · —	Presence of Redu		::- (00)		sh Burrows (C8)	- wi-al lara - m - m - (CO)
Drift Deposits (B3)		Recent Iron Redu		ilis (Cb)			erial Imagery (C9)
Algal Mat or Crust		Thin Muck Surfac				orphic Position (I	J2)
Iron Deposits (B5)		Other (Explain in	Remarks)			w Aquitard (D3)	
Water-Stained Lea	on Aerial Imagery (B7)					leutral Test (D5) num moss (D8) (
water-stained Lea	.ves (b9)				Spriag	num moss (Do)	LKK I, U)
Field Observations:							
	Yes NoX	Depth (inches):	N/A				
	Yes X No	Depth (inches):					
	Yes NoX	Depth (inches):		Wetland Hyd	rology Prese	nt? Yes	X No
(includes capillary fringe)		, ,		l	0,		
Describe Recorded Data	(stream gauge, monitoring well	, aerial photos, pre	evious inspection	s), if available:			
Remarks:							
A positive indication of we	etland hydrology was observed	(at least one prime	ary indicator)				
A positive indication of we	stiand hydrology was observed	(at least one prima	ary mulcator).				
Aguatic Fauna: crabs.							
Aquatio i auria. Grabs.							

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft.)	% cover	Species?	Status	Number of Dominant Species	
 					That Are OBL, FACW, or FAC: 1 (A)	
2.		-				
3.					Total Number of Dominant	
4.					Species Across All Strata: 1 (B)	
5.					(b)	
					Percent of Dominant Species	
6		0	= Total Cover		That Are OBL, FACW, or FAC: 100% (A/B)	
	EOO/ of total agreem		20% of total cover:	0	That Ale Obl., I ACW, OI I AC. (A/b)	
Capling Stratum (Diet size)	50% of total cover:		20% Of total cover.	0	Prevalence Index Worksheet:	\dashv
Sapling Stratum (Plot size:	30 ft.)					ł
1. None Observed					Total % Cover of: Multiply by:	
2.					OBL species x 1 = 100	
3.					FACW species	
4					FAC species	
5					FACU species 0	
6					UPL species	
		0	= Total Cover		Column Totals: (A) (A) (B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = 1.00	
1. None Observed						\Box
2			<u> </u>		Hydrophytic Vegetation Indicators:	
3					1 - Rapid Test for Hydrophytic Vegetation	
4			<u> </u>		X 2 - Dominance Test is >50%	
5					X 3 - Prevalence Index is $\leq 3.0^1$	
6.					Problematic Hydrophytic Vegetation ¹ (Explain)	
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:			•		be present, unless disturbed or problematic.	
1 Autoonnio gorminono		100	Yes	OBL	Definitions of Five Vegetation Strata:	\Box
2.					Tree - Woody plants, excluding woody vines,	
3.					approximately 20 ft (6m) or more in height and 3 in.	
4.					(7.6 cm) or larger in diameter at breast height (DBH).	
					(7.5 onl) of larger in diameter at breast neight (BBH).	
5					Sapling - Woody plants, excluding woody vines,	
6					approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8						
9					Shrub - Woody plants, excluding woody vines,	
10					approximately 3 to 20 ft (1 to 6 m) in height.	
11		400			approximately a to 20 tt (1 to a m) in noight	
	500/ 5/ /		= Total Cover	00	Herb - All herbaceous (non-woody) plants, including	
	50% of total cover:	50	20% of total cover:	20	herbaceous vines, regardless of size, <u>and</u> woody	
Woody Vine Stratum (Plot size:	30 ft)				plants, except woody vines, less than approximately	
1. None Observed					3 ft (1 m) in height.	
2						
3					Woody vine - All woody vines, regardless of height.	
4					woody vine - All woody vines, regardless of neight.	ļ
5						_
			= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes <u>X</u> No	
						_
Remarks: (if observed, list m	orphological adaptat	ions below).			
A positive indication of hydrop	ohytic vegetation was	s observed	(>50% of dominant	species index	ked as OBL, FACW, or FAC).	
A positive indication of hydrop	ohytic vegetation was	s observed	(Prevalence Index is	s ≤ 3.00).		
						- 1

Depth	Matrix			Redox I	eatures			
inches)	Color (moist)	%_	Color (moist)	%_	Type ¹	Loc ²	Texture	Remarks
0-3	2.5Y_5/1_	100	None				Sandy Loam	
3-20	N 4	_98_	10YR 5/4_	_2_	C	PL	Sandy Loam	
					-			
			D. d 1 M. 6			21	N. Daniel Linia a M. Matei	
	Concentration, D=De s Indicators: (App					Location: F	PL=Pore Lining, M=Matrix	x. ematic Hydric Soils ³ :
•		ilcable to a	•		oteu.) Surface (S8) (L l	DD C T III		
Histoso	` ,				e (S9) (LRR S, '		1 cm Muck (A9) 2 cm Muck (A10	
	Epipedon (A2) Histic (A3)				neral (F1) (LRR			(F18) (outside MLRA 150A ,
	gen Sulfide (A4)			Gleyed M		Ο,		plain Soils (F19) (LRR P, S,
	ed Layers (A5)			ed Matrix (ht Loamy Soils (F20)
	ic Bodies (A6) (LRR	P. T. III		Dark Surfa	,		(MLRA 153B)	in Loanly Gollo (1 20)
<u> </u>	/lucky Mineral (A7) (I				urface (F7)		Red Parent Mate	erial (TF2)
	Presence (A8) (LRR		· — ·	Depressio	` '			ark Surface (TF12)
	fluck (A9) (LRR P, T	•		10) (LRR	` '		Other (Explain in	` ,
	ed Below Dark Surfa				-, (F11) (MLRA 15	51)		,
	Dark Surface (A12)	()			Masses (F12) (-	³ Indicators of	hydrophytic vegetation and
	Prairie Redox (A16)	(MLRA 150		-	F13) (LRR P, T,	· · · · · · · · · · · · · · · ·	,	ology must be present,
	Mucky Mineral (S1)	-			7) (MLRA 151)	•	unless disturb	ed or problematic.
	Gleyed Matrix (S4)	, ,		•	F18) (MLRA 15 0	0A, 150B)		
	Redox (S5)		Piedmo	nt Floodp	lain Soils (F19) ((MLRA 149A)		
 Strippe	ed Matrix (S6)		Anoma	lous Brigh	t Loamy Soils (F	20) (MLRA 14	9A, 153C, 153D)	
Dark S	Surface (S7) (LRR P,	S, T, U)						
Restrictive	Layer (if observed)):						
Type:								
Depth (ir	nches):					Hydri	c Soil Present? Yes _	X No
Remarks:								
A positive in	ndication of hydric so	il was obsei	ved.					
•	,							

Project/Site:		Bluewater SPM		County:	Nueces	Sampling	Date: F	ebruary 5, 2019
Applicant/Owner:		Lloyd Engi	neering	Sta			Point:	•
Investigator(s):		and _		Section, Townshi		·	N/A	
Landform (hillslope, terr				Local relief (cond	ave, convex, nor	ne): None	Slope (%):	0-5
Subregion (LRR or MLF			e	Lat:27.8	362908Lo	ong: -97.08044	6 Datum	I: North American Datum 1983
Soil Map Unit Name:		ljan	n clay loam, rarely f			NWI Classification:		E2USP
Are climatic / hydrologic	conditions on	the site typical for t	this time of year?	(Yes / No)	YES	(if no, explain in Re	marks.)	
Are Vegetation	No,Soil	No ,or Hydrolo	gy No signi	ficantly disturbed?	Are "Normal C	ircumstances" prese	nt? Yes	X No
Are Vegetation	No,Soil	,or Hydrolo	gy No natur	rally problematic?	(If ne	eeded, explain any a	nswers in Rer	marks.)
SUMMARY OF F	NDINGS -	Attach site m	ap showing s	sampling poir	nt locations	, transects, im	portant fe	atures, etc.
				1			<u> </u>	<u> </u>
Hydrophytic Vegetation	Present?	Yes	NoX					
Hydric Soil Present?	i riesciit!	Yes	No X No X		alad Araa			
Wetland Hydrology Pro	esent?	Yes	No X	within a We		Yes	No	Y
vvettaria riyarology riv	Jone:	103	<u> </u>		, ciuria i	103	- ""—	
Remarks:								
This point was dat	arminad nat ta	. ha within a watlan	d due to the leek of	all three wetlend o	ritorio			
i nis point was det	ermined not to	be within a wetland	d due to the lack of	all three wetland c	riteria.			
HYDROLOGY								
Wetland hydrolog	y Indicators:					Secondary Indicato	rs (minimum o	of two required)
Primary Indicators	(minimum of c	one is required; che	ck all that apply)			Surface Soil	Cracks (B6)	
Surface Wa	er (A1)	_	Aquatic Fauna	a (B13)				ve Surface (B8)
High Water	Γable (A2)	_	Marl Deposits	(B15) (LRR U)		Drainage Pat	terns (B10)	
Saturation (/	\ 3)	_	Hydrogen Sul	lfide Odor (C1)		Moss Trim Li	nes (B16)	
Water Mark	s (B1)	_	Oxidized Rhiz	zospheres on Living	Roots(C3)	Dry-Season \	Water Table (C2)
Sediment De	eposits (B2)	_	Presence of F	Reduced Iron (C4)		Crayfish Burr	ows (C8)	
Drift Deposit	s (B3)		Recent Iron R	Reduction in Tilled S	Soils (C6)	Saturation Vi	sible on Aeria	I Imagery (C9)
Algal Mat or	Crust (B4)		Thin Muck Su	ırface (C7)		Geomorphic	Position (D2)	
Iron Deposit	s (B5)	_	Other (Explain	n in Remarks)		Shallow Aqui	tard (D3)	
		al Imagery (B7)				FAC-Neutral	Test (D5)	
	ed Leaves (B9						noss (D8) (LRI	R T, U)
Field Observations:								
Surface Water Presen			Depth (inch	es): N/A				
Water Table Present?	Yes	NoX	Depth (inch	es): >20				
Saturation Present?	Yes	NoX	Depth (inch	es): <u>>20</u>	Wetland Hyd	rology Present?	Yes	NoX
(includes capillary fring	, ,							
Describe Recorded	l Data (stream	n gauge, monitoring	well, aerial photos,	, previous inspection	ns), if available:			
Damarka:								
Remarks:								
No positive indicat	on of wetland	hydrology was obse	erved.					
Tro positivo maiota	o ooaa	, a. o. ogy mao ozo						

		Absoluto	Dominant	Indicator	Dominance Test worksh	eet:		
To a Observer (District	00 (*)	Absolute	Dominant	Indicator				
Tree Stratum (Plot size:		% cover	Species?	_Status_	Number of Dominant Spec			(4)
					That Are OBL, FACW, or I	FAC:	0	(A)
2								
3					Total Number of Dominant			
4					Species Across All Strata:		0	(B)
5								
6		-			Percent of Dominant Spec			
		0	= Total Cover		That Are OBL, FACW, or F	FAC:	0	(A/B)
		0	20% of total cover:	0				
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Works	neet:		
1. None Observed					Total % Cover of	<u>f:</u>	Multiply by:	
2) x 1		
3) x 2	=0	
4						x 3		
5					FACU species	x 4	- 0	
6					UPL species) x 5	i =0	
		0	= Total Cover		Column Totals:0	(A)	0	(B)
	50% of total cover:	0	20% of total cover:	0				
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index	= B/A =	N/A	
1. None Observed								
2.					Hydrophytic Vegetation I	ndicators:		
3.					1 - Rapid Test for	Hydrophytic '	Vegetation	
4.					2 - Dominance Te	est is >50%		
5.					3 - Prevalence Inc	dex is ≤ 3.0 ¹		
6.					Problematic Hydro	ophytic Veget	tation ¹ (Explain))
		0	= Total Cover					
	50% of total cover:		20% of total cover:	0	¹ Indicators of hydric soil a	and wetland h	vdrology must	
Herb Stratum (Plot size:					be present, unless disturbe			
4. Name Observed					Definitions of Five Veget			
2.					Tree - Woody plants, excl			
3.					approximately 20 ft (6m) or			
4.					(7.6 cm) or larger in diame	_		
5.					(,,g g		9 (==/.	
6.					Sapling - Woody plants, e	xcluding woo	dy vines,	
7					approximately 20 ft (6 m) of	or more in heig	ght and less	
8.					than 3 in. (7.6 cm) DBH.			
9.					, , ,			
10.					Shrub - Woody plants, exc	cluding woody	y vines,	
11.					approximately 3 to 20 ft (1	to 6 m) in hei	ight.	
			= Total Cover			,		
	50% of total cover:		20% of total cover:	0	Herb - All herbaceous (nor	n-woody) plar	nts. includina	
Woody Vine Stratum (Plot size:			20 % of total cover.		herbaceous vines, regardle	2, .		
1. None Observed	30 II.)				plants, except woody vines	· -	_ ′	
					3 ft (1 m) in height.	, ,	,	
2			-		, ,			
3.					Woody vine - All woody vi	ines regardle	ss of height	
4					,	,	oo oo.g	
5			= Total Cover		Lludranhutia			
	EOO/ of total powers		-	0	Hydrophytic			
	50% of total cover:		20% of total cover:	0	Vegetation		v	
					Present? Yes	No _	X	
Remarks: (if observed, list mo	orphological adaptati	ions below	').					
No positive indication of hydro	phytic vegetation wa	as observe	d (≥50% of dominar	nt species ind	exed as FAC- or drier).			
No vegetation present.								

nches) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks	epth	Matrix			Redox F	eatures			
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.	nches)	Color (moist)	<u>%</u>	Color (moist)	%_	Type ¹	Loc ²	Texture	Remarks
Histosol (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) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, S) Stratified Layers (A5) 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) 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) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Ward (A10) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Umbric Surface (F13) (LRR P, T, U) Umbric Surface (F13) (LRR A150A) Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Sardy 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) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	0-20	10YR 5/1_	100	None				Sandy Loam	
Histosol (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) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, S) Stratified Layers (A5) 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) 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) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Ward (A10) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Umbric Surface (F13) (LRR P, T, U) Umbric Surface (F13) (LRR A150A) Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Sardy 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) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X									
Histosol (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) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, S) Stratified Layers (A5) 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) 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) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Ward (A10) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Umbric Surface (F13) (LRR P, T, U) Umbric Surface (F13) (LRR A150A) Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Sardy 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) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X									
Histosol (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) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, S) Stratified Layers (A5) 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) 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) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Ward (A10) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Umbric Surface (F13) (LRR P, T, U) Umbric Surface (F13) (LRR A150A) Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Sardy 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) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X									
Histosol (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) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, S) Stratified Layers (A5) 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) 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) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Ward (A10) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Umbric Surface (F13) (LRR P, T, U) Umbric Surface (F13) (LRR A150A) Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Sardy 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) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X									
Histosol (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) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, S) Stratified Layers (A5) 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) 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) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Ward (A10) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Umbric Surface (F13) (LRR P, T, U) Umbric Surface (F13) (LRR A150A) Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Sardy 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) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	 Tvpe: C=C	oncentration. D=Dep	 oletion. RM=	 Reduced Matrix. N	—— MS=Masked	d Sand Grains.	² Location: P	L=Pore Lining, M=Matri	ix.
Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) Muck Presence (A8) (LRR P, T, U) Depleted Dark Surface (F7) 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) Anomalous Bright Loamy Soils (F20) MIRA 153B) Anomalous Bright Loamy Soils (F20) MIRA 153B) Anomalous Bright Loamy Soils (F20) MIRA 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) Delta Ochric (F17) (MLRA 151) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Anomalous Bright Loamy Soils (F20) Mira 153B) Anomalous Bright Loamy Soils (F20) Mira 153B) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Remarks:									
Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Organic Bodies (A6) (LRR P, T, U) Sometime Muck (A6) (LRR P, T, U) Muck Presence (A8) (LRR P, T, U) Depleted Dark Surface (F7) Mark (F10) (LRR U) Depleted Delour (F11) (MLRA 151) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Redox Depressions (F8) Wery Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Jepleted Delta Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Reduced Vertic (F18) (outside MLRA 150A Mark (F2) Piedmont Floodplain Soils (F19) (MLRA 153B) Anomalous Bright Loamy Soils (F20) Muck 4153B) Reduced Vertic (F18) (outside MLRA 150A (MLRA 153B) Anomalous Bright Loamy Soils (F20) Redox Depressions (F8) Wery Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Delta Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F12) (LRR O, P, T) Wetland hydrology must be present, unless disturbed or problematic. Sandy Gleyed Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Reduced Vertic (F18) (MLRA 150A) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Hydric Soil Present? Yes No X Redox Depressions (F8) Anomalous Bright Loamy Soils (F20) (Present? Yes No X Remarks:	Histoso	ol (A1)		Polyva	alue Below S	Surface (S8) (L l	RR S, T, U)	1 cm Muck (A9)	(LRR O)
Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T) Sandy Bleyd Matrix (F2) Depleted Matrix (F3) Depleted Matrix (F3) Depleted Matrix (F3) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF2) Wery Shallow Dark Surface (TF12) Other (Explain in Remarks) 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) Dark Surface (S7) (LRR P, S, T, U) Despleted Selow Dark Surface (S7) (LRR O, S) Siripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Despleted Selow Dark Surface (S7) (LRR O, S, T, U) Despleted Dark Surface (F13) (LRR O, S) Sandy Redox (S5) Despleted Selow Dark Surface (F13) (LRR O, P, T) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A) Siripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Despleted Selow Dark Surface (S7) (LRR P, S, T, U) Despleted Selow Dark Surface (S7) (LRR P, S, T, U) Despleted Selow Dark Surface (S7) (LRR P, S, T, U) Despleted Selow Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Selow Dark Surface (F13) (LRR P, T, U) Despleted Ochric (F17) (MLRA 150A) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Despleted Selow Dark Surface (S7) (LRR P, S, T, U) Despleted Below Dark Surface (S7) (LRR P, S, T, U) Despleted Below Dark Surface (S7) (LRR P, S, T, U) Despleted Below Dark Surface (F13) (LRR P, T, U) Despleted Below Dark Surface (F13) (LRR P, T, U) Despleted Below Dark Surface (F12) Despleted Below Dark Surface (F13) (LRR P, T, U) Despleted Below Dark Surface (F13) (LRR P, T, U) Selow Dark Surface (F13) (LRR P, T, U) Despleted Below Dark Surface (F13) (LRR P, T, U) Despleted Below Dark Surface (F13) (LRR P, T, U) Despleted Below Dark Surface (F13	Histic E	pipedon (A2)		Thin D	ark Surface	e (S9) (LRR S,	T, U)	2 cm Muck (A10	0) (LRR S)
Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Organic Bodies (A6) (LRR P, T, U) Seemarks: Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) Muck Presence (A6) (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) Other (Explain in Remarks) 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) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Peter Sandy Redox (B10) 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) Other (Explain in Remarks) Iron-Manganese Masses (F12) (LRR O, P, T) Wetland hydrology must be present, unless disturbed or problematic. Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Peter Soil Present? Yes No X No X Remarks:	Black F	Histic (A3)		Loamy	Mucky Mir	neral (F1) (LRR	O)	Reduced Vertic	(F18) (outside MLRA 150A
Organic Bodies (A6) (LRR P, T, U) Seteric Everage (Bab) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Depleted Dark Surface (F7) Red Parent Material (TF2) Red Parent Material (TF2) Nuck Presence (A8) (LRR U) Redox Depressions (F8) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 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) Reduced Vertic (F18) (MLRA 150B) Piedmont Floodplain Soils (F20) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	Hydrog	en Sulfide (A4)		Loamy	Gleyed Ma	atrix (F2)		Piedmont Flood	lplain Soils (F19) (LRR P, S,
5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Expl		, , ,		Deplet	ted Matrix (I	F3)		Anomalous Brig	ht Loamy Soils (F20)
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 (F13) (MLRA 151) Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Sestrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	Organio	c Bodies (A6) (LRR	P, T, U)	Redox	Dark Surfa	ace (F6)		(MLRA 153B)	
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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Destrictive Layer (if observed): Type: Depth (inches): Type: Depth (inches): Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Jepleta Ochric (F13) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR U) Depleted Ochric (F13) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Methods (F12) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Marl (F10) (LRR P, S, T, U) Marl (F10) (LRR U) Jestinic Remarks: Methods (A12) Depth (Inches): Methods (A12) John March (F10) (MLRA 151) John March (F12) (MLRA 150) Joh	5 cm M	lucky Mineral (A7) (L	.RR P, T, U)	Deplet	ted Dark Su	ırface (F7)			` '
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: Depth (inches): Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Iron-Manganese Masses (F12) (LRR P, T, U) Iro		, , ,	-			` '			, ,
Thick Dark Surface (A12)	1 cm M	luck (A9) (LRR P, T))	Marl (F	=10) (LRR I	U)		Other (Explain i	n 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) Restrictive Layer (if observed): Type: Depth (inches): Delta Ochric (F13) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Method Nucky Mineral (S1) (LRR O, S) Delta Ochric (F13) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes NoX			ce (A11)		,		-	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) Restrictive Layer (if observed): Type: Depth (inches): Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Reduced Vertic (F18) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Hydric Soil Present? Yes No X		` ,			-	, , ,	· · · · · · · · · · · · · · · · · · ·		, , , ,
Sandy Miller (S1) (LRR 0, 5) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Type: Depth (inches): Type: Depth (inches):		, ,	-				U)		
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Temarks:	_ ′	, , ,	(LRR O, S)		,				·
Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Destrictive Layer (if observed): Type: Depth (inches): No X Destrictive Layer (F20) (MLRA 149A, 153C, 153D) Hydric Soil Present? Yes No X		. , ,			,	* *	•		
Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X		, ,				, ,	. ,		
Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:		` ,		Anoma	alous Bright	Loamy Soils (F	·20) (MLRA 149	9A, 153C, 153D)	
Type: Hydric Soil Present? Yes NoX	Dark Si	urface (S7) (LRR P,	S, I, U)						
Depth (inches): NoX Remarks:	Restrictive	Layer (if observed)	:						
lemarks:	Type:								
	Depth (in						Hydrid	Soil Present? Yes_	NoX
) om orko								
lo positive indication of hydric soils was observed.	temarks:								
	lo positive i	indication of hydric s	oils was obs	erved.					

Project/Site:	Bluewater SPM	Cour	nty:	Nueces	San	npling Date:	February 5, 2019
Applicant/Owner:	Lloyd Engineerii	ng	State	: <u></u>	Texas Sai	mple Point:	DPB028_PEM
Investigator(s): C. E	Bailey and N	. Trivino Sec	tion, Township,	Range:		N/A	
Landform (hillslope, terrace, etc.		er Loc	al relief (concav	e, convex, no	ne): Non	e Slope (9	%): <u>0-5</u>
Subregion (LRR or MLRA):	None		Lat:27.86	4655 Lo	ong: <u>-97.0</u>	083574 Dat	um: North American Datum 1983
Soil Map Unit Name:	ljam clay	loam, rarely floode			_ NWI Classific	ation:	E2EM1N
Are climatic / hydrologic condition	ons on the site typical for this ti	- '	es / No)		(if no, explain	,	
Are Vegetation No, S			-			•	
Are Vegetation No ,S	Soil No , or Hydrology _	No naturally p	roblematic?	(If n	eeded, explain	any answers in F	Remarks.)
SUMMARY OF FINDING	GS - Attach site map	showing sam	pling point	locations	, transects	, important	features, etc.
Hydrophytic Vegetation Preser	nt? Yes X I	No					
Hydric Soil Present?		No	Is the Sample	ed Area			
Wetland Hydrology Present?		No	within a Wetl		Yes	X No	
, 3,							
Remarks:							
This point was determined	to be within a wetland due to t	he presence of all 3	3 wetland criteri	a.			
HADBOI UCA							
HYDROLOGY Wetland hydrology Indica	ators:				Sacandanili	dicators (minimum	n of two required
	m of one is required; check all	that apply)				e Soil Cracks (B6	n of two required)
Surface Water (A1)	•	Aquatic Fauna (B13	3)			,	ncave Surface (B8)
X High Water Table (A		Marl Deposits (B15	•			ge Patterns (B10)	, ,
Saturation (A3)	· —	Hydrogen Sulfide C				rim Lines (B16)	
Water Marks (B1)		Oxidized Rhizosphe		Roots(C3)		ason Water Tabl	e (C2)
Sediment Deposits (Presence of Reduc	_	10010(00)		h Burrows (C8)	5 (52)
Drift Deposits (B3)	· —	Recent Iron Reduct		ils (C6)			rial Imagery (C9)
Algal Mat or Crust (E		Thin Muck Surface		(OO)		rphic Position (D	, ,
Iron Deposits (B5)	· —	Other (Explain in R				v Aquitard (D3)	_,
Inundation Visible or		O (p	,			eutral Test (D5)	
Water-Stained Leave	- · · ·					num moss (D8) (I	RR T. U)
	()					(= 2) (=	, 27
Field Observations:							
Surface Water Present? Y	es NoX	Depth (inches):	N/A				
Water Table Present? Y	es X No	Depth (inches):	2				
	es NoX	Depth (inches):	>20	Wetland Hyd	Irology Preser	nt? Yes <u>)</u>	(No
(includes capillary fringe)							
Describe Recorded Data (s	stream gauge, monitoring well,	aerial photos, previ	ious inspections	s), if available:			
Remarks:							
Remarks.							
A positive indication of wet	land hydrology was observed (at least one primary	y indicator).				
Aquatic Fauna: fish.							

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft.)	% cover	Species?	Status	Number of Dominant Species	
4. Mana Ohaanaa	,		· <u>··</u>		That Are OBL, FACW, or FAC:	A)
2.						
3					Total Number of Dominant	
4			<u> </u>		Species Across All Strata:1 (I	B)
5						
6					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC: 100% (A	A/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1. None Observed					Total % Cover of: Multiply by:	_
2					OBL species x 1 =100	_
3.					FACW species 0 x 2 = 0	_
4					FAC species 0 x 3 = 0	_
5			·		FACU species	_
6			- Total Cover		UPL species 0 x 5 = 0	— _(B)
	FOO/ of total acuser		= Total Cover	0	Column Totals: (A) 100	(B)
Shrub Stratum (Plot size:	50% of total cover:		20% of total cover:		Prevalence Index = B/A = 1.00	
1. None Observed	<u> 30 II.</u>)				rievalence index – B/A – 1.00	_
2					Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
4.					X 2 - Dominance Test is >50%	
5.				-	X 3 - Prevalence Index is ≤ 3.0 ¹	
6.					Problematic Hydrophytic Vegetation ¹ (Explain)	
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
1. Avicennia germinans		100	Yes	OBL	Definitions of Five Vegetation Strata:	
2					Tree - Woody plants, excluding woody vines,	
3					approximately 20 ft (6m) or more in height and 3 in.	
4					(7.6 cm) or larger in diameter at breast height (DBH).	
5						
6					Sapling - Woody plants, excluding woody vines,	
7					approximately 20 ft (6 m) or more in height and less	
8					than 3 in. (7.6 cm) DBH.	
9					Shrub - Woody plants, excluding woody vines,	
10			·		approximately 3 to 20 ft (1 to 6 m) in height.	
11		100			approximatory of to 20 ft (1 to 0 ft), in noight.	
	50% of total cover:		= Total Cover 20% of total cover:	20	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:	50% of total cover:		20% of total cover.		herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2.					3 ft (1 m) in height.	
3.						
4.	<u> </u>			•	Woody vine - All woody vines, regardless of height.	
5.						
		0	= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes X No	
Remarks: (if observed, list me	orphological adaptati	ons below).			
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	species index	red as OBL, FACW, or FAC).	
A positive indication of hydron	hytic vegetation was	observed	(Prevalence Index is	s < 3 00)		

epth	Matrix			Redox F	eatures					
nches)	Color (moist)	%	Color (moist)	%_	Type ¹	Loc ²	Texture	Remarks		
0-3	2.5Y 5/1	100	None				Sandy Loam			
3-20	N 4	_98_	10YR 5/4	2	C	PL	Sandy Loam			
Type: C=0	Concentration, D=De	oletion, RM	I=Reduced Matrix, M	IS=Masked	d Sand Grains.	² Location: P	L=Pore Lining, M=Matrix			
lydric Soi	ls Indicators: (Appl	icable to	all LRRs, unless ot	herwise n	oted.)		Indicators for Proble			
Histos	ol (A1)		Polyva	ue Below S	Surface (S8) (Li	RR S, T, U)	1 cm Muck (A9) (LRR O)		
Histic	Epipedon (A2)		Thin Da	ark Surface	e (S9) (LRR S, 1	Γ, U)	2 cm Muck (A10)	(LRR S)		
Black	Histic (A3)		Loamy	Mucky Mir	neral (F1) (LRR	O)	Reduced Vertic (F18) (outside MLRA 150A,B		
Hydro	gen Sulfide (A4)		Loamy	Gleyed Ma	atrix (F2)		Piedmont Floodp	lain Soils (F19) (LRR P, S, T		
Stratifi	ied Layers (A5)		Deplete	ed Matrix (F	F3)		Anomalous Brigh	t Loamy Soils (F20)		
Organ	ic Bodies (A6) (LRR	P, T, U)	Redox	Dark Surfa	ace (F6)		(MLRA 153B)			
5 cm N	Mucky Mineral (A7) (I	RR P, T,	J) Deplete	ed Dark Su	ırface (F7)		Red Parent Mate	rial (TF2)		
Muck	Presence (A8) (LRR	U)	Redox	Redox Depressions (F8)				rk Surface (TF12)		
1 cm N	Muck (A9) (LRR P, T))	Marl (F	10) (LRR l	U)		Other (Explain in	Remarks)		
Deplet	ted Below Dark Surfa	ce (A11)	Deplete	ed Ochric (F11) (MLRA 15	1)				
Thick	Dark Surface (A12)		Iron-Ma	anganese N	Masses (F12) (I	LRR O, P, T)	T) ³ Indicators of hydrophytic vegetation a wetland hydrology must be present, unless disturbed or problematic.			
Coast	Prairie Redox (A16)	(MLRA 15	0A) Umbrid	Surface (F	=13) (LRR P, T,	U)				
Sandy	Mucky Mineral (S1)	(LRR O, S) Delta C	chric (F17) (MLRA 151)		uniess disturbe	ed or problematic.		
X Sandy	Gleyed Matrix (S4)		Reduce	ed Vertic (F	18) (MLRA 150	A, 150B)				
X Sandy	Redox (S5)		Piedmo	nt Floodpl	ain Soils (F19) (MLRA 149A)				
Stripp	ed Matrix (S6)		Anoma	lous Bright	Loamy Soils (F	20) (MLRA 14 9	9A, 153C, 153D)			
Dark S	Surface (S7) (LRR P,	S, T, U)								
Restrictive	Layer (if observed)):								
Type:										
	nches):					Hydrid	Soil Present? Yes _	X No		
Remarks:										

Applicant/Owner: Lloyd Engineering State: Texas Sample Point: DPB029_U Investigator(s): C. Bailey and N. Trivino Section, Township, Range: N/A Landform (hillslope, terrace, etc.): Beach Local relief (concave, convex, none): None Slope (%): 0-5 Subregion (LRR or MLRA): None Lat: 27.864665 Long: 97.083477 Datum: North American Datum 1983 Soil Map Unit Name: Ijam clay loam, rerely flooded NWI Classification: E2USP Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) YES (if no, explain in Remarks.) Are Vegetation No Soil No or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No Are Vegetation No Soil No or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No X Is the Sampled Area Wetland Hydrology Present? Yes No X Is the Sampled Area Wetland Hydrology Present? Yes No X within a Wetland? Yes No X This point was determined not to be within a wetland due to the lack of all three wetland criteria.	Project/Site:		Bluewater SPN	Л	Со	unty:	Nueces		Sampling	Date: Fo	ebruary 5, 2019	
Investigator(s):	Applicant/Owner:					-					•	
LandCom (fillallope, terrace, etc.):	Investigator(s):	C. Bailey	•			ction, Township	o, Range:			N/A	_	
Subregion (LRR or MLRA); None Igin day loam, rarely flooded New Year None Igin day loam, rarely flooded New Year New Y	Landform (hillslope, terrac					cal relief (conca	ave, convex,	none):	None	Slope (%):	0-5	
Soli Map Unit Name:				None		Lat: 27.8	64665	Long:	-97.08347	7 Datum	North American Datur	n 1983
Are Vegetation No Soil No or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No No Are Vegetation No Soil No or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No X Is the Sampled Area within a Wetland Hydrology Present? Yes No X Wetland Hydrology Present? Yes No X Is the Sampled Area within a Wetland? Yes No X Wetland Hydrology Indicators: This point was determined not to be within a wetland due to the lack of all three wetland criteria. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) Aquatic Fauna (B13) Sparsely Vegetated Concave Surface (B8) Hydrology Indicators (minimum of one is required; check all that apply) Sparsely Vegetated Concave Surface (B8) Hydrology Indicators (Indimum of one is required; check all that apply) Sparsely Vegetated Concave Surface (B8) Surface Water (A1) Aquatic Fauna (B13) Sparsely Vegetated Concave Surface (B8) Hydrology Indicators (Indimum of one is required; check all that apply) Sparsely Vegetated Concave Surface (B8) Water Marks (B1) Oxidized Rhizospheres on Living Roots(C3) Dry-Season Water Table (C2) Sediment Deposits (B3) Presence of Reduced Iron (C4) Crayfible Burrows (C8) Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9) Algal Mai or Crust (B4) Thin Muck Surface (C7) Geomorphic Position (D2) Inon Deposits (B3) Oxidized Rhizospheres on Living Romarks) Spangun moss (D8) (LRR T, U) Field Observations: Surface Water Present? Yes No X Depth (Inches): 220 Water Table Present? Yes No X Depth (Inches): 220 Surface Water Present? Yes No X Depth (Inches): 220 Wetland Hydrology Present? Yes No X Depth (Inches): 220 Surface Water Table Present? Yes No X Depth (Inches): 220 Surface Water Table Prese	Soil Map Unit Name:			ljam clay							,	
Are Vegetation No Soil No or Hydrology No naturally problematic? ((If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No X Is the Sampled Area within a Wetland Hydrology Present? Yes No X Is the Sampled Area within a Wetland Hydrology Present? Yes No X Is the Sampled Area within a Wetland? Yes No X Remarks: This point was determined not to be within a wetland due to the lack of all three wetland criteria. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) Aquatic Fauna (B13) Sparsely Vegetated Concave Surface (B8) High Water Table (A2) Mart Deposits (B15) (LRR U) Dransper Patterns (B16) Water Marks (B1) Oxidized Rhizospheres on Living Roots(C3) Dry-Season Water Table (C2) Sediment Deposits (B2) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Drift Deposits (B3) Recent fron Reduction in Tilled Soils (C6) Saturation (Na) Algal Mat or Crust (B4) Thin Muck Surface (C7) Geomorphic Position (D2) Iron Deposits (B5) Other (Explain in Remarks) Shallow Aquitard (D3) FAC-Neutral Test (D5) Sphagnum moss (D8) (LRR T, U) Field Observations: Surface Water Present? Yes No X Depth (inches): 220 Wetland Hydrology Present? Yes No X Opeth (inches): 220 Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Are climatic / hydrologic c	onditions or	n the site typica	I for this tin	ne of year? (/es / No)	YES	(if no, e	xplain in Re	marks.)		
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes NoX Hydric Soil Present? Yes NoX Wetland Hydrology Present? Yes NoX Wetland Hydrology Present? Yes NoX Wetland hydrology Indicators (minimum of two required) Primary Indicators (minimum of two required) Primary Indicators (minimum of two required) Primary Indicators (minimum of two required) Surface Soil Cracks (B6) Surface Water (A1)	Are Vegetation No.	,Soil_	No ,or Hyo	drology	No significar	ntly disturbed?	Are "Norma	al Circumsta	ances" prese	nt? Yes	X No	
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Saturation (A3)		` '				•					,	
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Drift Deposits (B3)	· — `	,			-	-	()		-	,	,	
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(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	Water Table Present?	Yes	No	Х	Depth (inches):	>20						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:			No _	Х	Depth (inches):	>20	Wetland H	lydrology I	Present?	Yes	NoX	
Remarks:	(includes capillary fringe)											
	Describe Recorded [)ata (strear	n gauge, monito	oring well, a	aerial photos, pre	vious inspection	ns), if availab	ole:				
No positive indication of wetland hydrology was observed.	Remarks:											
No positive indication of wetland hydrology was observed.												
	No positive indication	ı of wetland	l hydrology was	observed.								

					Daminana Tast wallahasti	
		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft.)	% cover	Species?	Status	Number of Dominant Species	
4. Nove Observed	·				That Are OBL, FACW, or FAC: 0	(A)
						(- ',
2						
3					Total Number of Dominant	
4					Species Across All Strata: 0	(B)
5						
6.					Percent of Dominant Species	
0			= Total Cover	-	•	(A (D)
					That Are OBL, FACW, or FAC: 0	(A/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1. None Observed					Total % Cover of: Mult	Itiply by:
					OBL species 0 x 1 =	0
2					· — — —	
3					FACW species 0 x 2 =	
4					FAC species 0 x 3 =	0
5					FACU species 0 x 4 =	0
6.					UPL species 0 x 5 =	0
o			- Total Caver			
			= Total Cover		Column Totals:0 (A)	0 (B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A =	N/A
1. None Observed	_					
					Hydrophytic Vegetation Indicators:	
2.						
3					1 - Rapid Test for Hydrophytic Vegetati	ion
4					2 - Dominance Test is >50%	
5					3 - Prevalence Index is ≤ 3.0 ¹	
6.					Problematic Hydrophytic Vegetation ¹ (E	Evnlain)
0					1 Toblematic Trydrophytic Vegetation (E	_xpiairi)
			= Total Cover			
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology	y must
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
1 Nana Ohaaniad					Definitions of Five Vegetation Strata:	
					_	
2					Tree - Woody plants, excluding woody vines,	
3					approximately 20 ft (6m) or more in height and 3	3 in.
4					(7.6 cm) or larger in diameter at breast height (E	DBH).
5.						
					Sapling - Woody plants, excluding woody vines	s
6						
7					approximately 20 ft (6 m) or more in height and	iess
8					than 3 in. (7.6 cm) DBH.	
9.						
10.					Shrub - Woody plants, excluding woody vines,	
					approximately 3 to 20 ft (1 to 6 m) in height.	
11					approximately 0 to 20 ft (1 to 0 ff) in height.	
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	Herb - All herbaceous (non-woody) plants, inclu	uding
Woody Vine Stratum (Plot size:	30 ft.)		•		herbaceous vines, regardless of size, and wood	yt
1. None Observed					plants, except woody vines, less than approxima	ately
						,
2					3 ft (1 m) in height.	
3						
4.					Woody vine - All woody vines, regardless of he	∍ight.
5.						
5	-		- Total Cover		Hudrophytic	
			= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes NoX	
						_
Danasilas (if abassus d list as			\ \			
Remarks: (if observed, list mo	orpnological adaptat	ions below).			
No positive indication of hydro	nhytic vegetation wa	as observe	d (>50% of dominan	t species inde	exed as FAC- or drier)	
140 positive maleation of myare	priyao vogotaaon w	20 0000110	a (=0070 or dominari	t opooloo iiida	should by the or unory.	
No vegetation present.						

Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks 10-20 10YR 5/1 100 None — — — — Sandy Loam)epth	Matrix			Redox F	eatures			
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. PL=Pore Lining, M=Matrix. Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils 3: Histosol (A1)	nches)	Color (moist)	%	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks
Histosol (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) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) Organic Bodies (A6) (LRR P, T, U) Peleted Dark Surface (F6) (MLRA 153B) Muck Presence (A8) (LRR P, T, U) Depleted Dark Surface (F7) Redox Depressions (F8) Very Shallow Dark Surface (T12) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Sandy Mucky Mineral (S1) (LRR O, S) Piedmont Floodplain Soils (F20) (MLRA 149A) Stripped Matrix (S4) Redox Depressions (F8) Very Shallow Dark Surface (T12) Umbric Surface (F13) (LRR O, P, T) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) Other (Explain in Remarks) Destripped Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Destrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	0-20	10YR 5/1	100	None				Sandy Loam	
Histosol (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) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) Organic Bodies (A6) (LRR P, T, U) Peleted Dark Surface (F6) (MLRA 153B) Muck Presence (A8) (LRR P, T, U) Depleted Dark Surface (F7) Redox Depressions (F8) Very Shallow Dark Surface (T12) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Sandy Mucky Mineral (S1) (LRR O, S) Piedmont Floodplain Soils (F20) (MLRA 149A) Stripped Matrix (S4) Redox Depressions (F8) Very Shallow Dark Surface (T12) Umbric Surface (F13) (LRR O, P, T) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) Other (Explain in Remarks) Destripped Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Destrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X									
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Histosol (A1)							² Location: P		
Histic Epipedon (A2) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Depleted Matrix (F3) Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR P, T) Depleted Dark Surface (F7) 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) Stratified Layers (A5) Depleted Dark Surface (A11) Depleted Dark Surface (A11) Depleted 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) Reduced Vertic (F18) (MLRA 150B) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Reduced Vertic (F18) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Hydric Soil Present? Yes No X	•	,	cable to all	-		•			•
Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Organic Bodies (A6) (LRR P, T, U) So mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR P, T, U) Depleted Dark Surface (F7) Mark (F10) (LRR U) Depleted Delour (F11) (MLRA 151) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Redox Depressions (F8) Wery Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Jepleted Delour Surface (F12) (LRR O, P, T) Jepleted Delour Surface (F13) (LRR P, T, U) Depleted Delour Surface (F13) (LRR P, T, U) Depleted Ochric (F17) (MLRA 151) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Redox Depressions (F8) Wery Shallow Dark Surface (TF12) Other (Explain in Remarks) Jepleted Chric (F11) (MLRA 151) Findicators 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) Reduced Vertic (F18) (MLRA 150A, 150B) Reduced Vertic (F18) (MLRA 150A, 150B) Reduced Vertic (F18) (MLRA 150A, 150B) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X		` ,				` , `			
Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Delta Ochric (F17) (MLRA 159) Delta Ochric (F18) (MLRA 159A) Sardy Redox (S7) (LRR P, S, T, U) Sardy Redox (S7) (LRR P, S, T, U) Sandy Redox (S5) Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Delta Ochric (F18) (MLRA 150A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Delta Ochric (F18) (MLRA 150A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Delta Ochric (F18) (MLRA 150A) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Delta Ochric (F18) (MLRA 150A) Hydric Soil Present? Yes No X							-		
Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Fresence (A8) (LRR P, T) Depleted Dark Surface (F6) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Depleted Dark Surface (A7) Depleted Dark Surface (A7) Marl (F10) (LRR U) Depleted Dark Surface (F7) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Depleted Derive (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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Pestrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes NoX Manalous Bright Loamy Soils (F20) Anomalous Bright Loamy Soils (F20) MLRA 153B) Anomalous Bright Loamy Soils (F20) Present? Yes NoX		, ,			-		O)		
Organic Bodies (A6) (LRR P, T, U) Set Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F6) Muck Presence (A8) (LRR U) Redox Depressions (F8) Depleted Dark Surface (F7) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 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) Reduced Vertic (F18) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X		- , ,			-	, ,			, , ,
5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) Depleted Dark Surface (F7) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)		, , ,	. T III		,	•			nt Loamy Soils (F20)
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) Depleted Ochric (F11) (MLRA 151) 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 (F13) (MLRA 150A) Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Sestrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X		, , ,	· · · · · ·			• ,		•	orial (TE2)
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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Destar Civer Layer (if observed): Type: Depth (inches): Type: Depth (inches): Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Jolicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR U) Depleted Ochric (F13) (MLRA 151) Sandy Redox (A16) (MLRA 150A) Reduced Vertic (F18) (MLRA 151) Marl (F10) (LRR P, T, U) Jolicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR U) Jolicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (MLRA 151) Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Reduced Vertic (F18) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A), 153C, 153D) Mark Surface (S7) (LRR P, S, T, U) Mark Surface (S7) (LRR P, S, T, U) Mark Soil Present? Yes No X		, , ,	· · · · · ·			` '			` '
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) Delta Ochric (F17) (MLRA 150A) Strippe: Depth (inches): Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Iron-Manganese Masses (F12) (LRR O, P, T) Iron-Manganese Masses (F12) (LRR O, P, T) Iron-Manganese Masses (F12) (LRR P, T, U) Ir		, , .	-		•				, ,
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) Dark Surface (S7) (LRR P, S, T, U) Elestrictive Layer (if observed): Type: Depth (inches): Type: Depth (inches): Iron-Manganese Masses (F12) (LRR O, P, T) Jenn-Manganese Masses (F12) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Methods (F17) (MLRA 151) And Surface (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Hydric Soil Present? Yes NoX NoX		, , , .					4\	Other (Explain if	r 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) Restrictive Layer (if observed): Type: Depth (inches): Delta Ochric (F13) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Method Nucky Mineral (S1) (LRR O, S) Reduced Vertic (F18) (MLRA 150A, 150B) Reduced Vertic (F18) (MLRA 149A) Reduced Vertic (F18) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X			c (ATT)				· ·	³ Indicators of	hydrophytic vegetation and
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) Restrictive Layer (if observed): Type: Depth (inches): 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) Hydric Soil Present? Yes No X		` ,	MI RA 150A		-	, , ,	· · · · ·		, , , ,
Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes NoX		` , ,					0,	unless disturb	ed or problematic.
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Lestrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X			Little 0, 0,		•		Δ 150B)		
Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Destrictive Layer (if observed): Type: Depth (inches): No X Destrictive Layer (if observed): No X					•	* *	· ·		
Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:		, ,			•		-	9A. 153C. 153D)	
Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:		` ,	S. T. U)			. 200, 00 (.	_0, (<u>_</u>	,,,	
Type: NoX		()()	-, , -,						
Depth (inches): Hydric Soil Present? Yes No X demarks:	Restrictive	Layer (if observed):	1						
lemarks:	Type:								
lemarks:		nches):					Hydri	c Soil Present? Yes	No X
		,						_	
lo positive indication of hydric soils was observed.	Remarks:								
lo positive indication of hydric soils was observed.									
	lo positive	indication of hydric so	oils was obse	rved.					

Project/Site:	Bluewater SPM	County:	Nueces	Sampling D	ate: February 5, 2019
Applicant/Owner:	Lloyd Engineering		State:	Texas Sample Po	int: DPB030_PEM
Investigator(s): C. B	ailey and N. T	rivino Section, T	ownship, Range:		N/A
Landform (hillslope, terrace, etc.)): Marsh, Saltwater	Local relie	f (concave, convex, r	none): None	Slope (%): 0-5
Subregion (LRR or MLRA):	None	Lat:	27.864895 I	_ong:97.082785	Datum: North American Datum 1983
Soil Map Unit Name:	ljam clay lo	am, rarely flooded		NWI Classification: _	E2USN
Are climatic / hydrologic condition	• •	,		(if no, explain in Rem	,
Are Vegetation No,S				Circumstances" present	
Are Vegetation No ,S	oil No, or Hydrology	No naturally problem	atic? (If	needed, explain any ans	swers in Remarks.)
SUMMARY OF FINDING	GS - Attach site map sh	nowing sampling	point location	s, transects, imp	ortant features, etc.
Hydrophytic Vegetation Present	t? Yes X No				
Hydric Soil Present?		Is the	Sampled Area		
Wetland Hydrology Present?			n a Wetland?	Yes X	No
, 3,					·
Remarks:					
This point was determined t	to be within a wetland due to the	presence of all 3 wetla	nd criteria.		
HYDROLOGY					
Wetland hydrology Indica	itors:			Secondary Indicators	(minimum of two required)
	m of one is required; check all tha	at annly)		Surface Soil Cr	
X Surface Water (A1)	·	juatic Fauna (B13)			tated Concave Surface (B8)
High Water Table (A2		arl Deposits (B15) (LRR	: U)	Drainage Patte	, ,
Saturation (A3)	· —	drogen Sulfide Odor (C		Moss Trim Line	
Water Marks (B1)		kidized Rhizospheres or	Living Roots(C3)	Dry-Season W	ater Table (C2)
Sediment Deposits (E	32) Pro	esence of Reduced Iror	n (C4)	Crayfish Burrov	vs (C8)
Drift Deposits (B3)	Re	ecent Iron Reduction in	Tilled Soils (C6)	Saturation Visil	ole on Aerial Imagery (C9)
Algal Mat or Crust (B-	4) Th	in Muck Surface (C7)		Geomorphic Po	osition (D2)
Iron Deposits (B5)		her (Explain in Remark	s)	Shallow Aquita	rd (D3)
Inundation Visible on	, ,			X FAC-Neutral To	est (D5)
Water-Stained Leave	s (B9)			Sphagnum mos	ss (D8) (LRR T, U)
Field Observations:					
	es X No [Depth (inches): 1			
		Depth (inches): >20	_		
		Depth (inches): >20		drology Present?	res X No
(includes capillary fringe)		,	_		
Describe Recorded Data (st	tream gauge, monitoring well, ae	erial photos, previous in	spections), if available	e:	
Remarks:					
A positive indication of wetle	and hydrology was absorved (at	locat one primary indica	otor)		
A positive indication of well	and hydrology was observed (at	least one primary indica	ator).		
Aquatic Fauna: fish, crabs.					

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
<u>Tree Stratum</u> (Plot size:30_ft)	% cover	Species?	Status	Number of Dominant Species	
1. None Observed		<u> </u>		That Are OBL, FACW, or FAC:	(A)
2					(-)
3				Total Number of Dominant	
4				Species Across All Strata: 1	(B)
				Species / toross / till otilata.	(5)
5				Percent of Dominant Species	
6	0	= Total Cover		That Are OBL, FACW, or FAC: 100%	(A/B)
F00/ -54-4-1		•	0	That Are OBL, FACW, of FAC.	(A/D)
50% of total cover		20% of total cover:	0	Prevalence Index Worksheet:	
Sapling Stratum (Plot size: 30 ft.)					
1. None Observed		·		Total % Cover of: Multiply by:	
2				OBL species <u>60</u> x 1 = <u>60</u>	
3				FACW species 0 x 2 = 0	
4		<u> </u>		FAC species 0 x 3 = 0	
5				FACU species 0 x 4 = 0	
6		<u> </u>		UPL species 0 x 5 = 0	
	0	= Total Cover		Column Totals: (A) 60	(B)
50% of total cover	:0	20% of total cover:	0		
Shrub Stratum (Plot size:30 ft) 1. None Observed				Prevalence Index = B/A = 1.00	
2				Hydrophytic Vegetation Indicators:	
3				1 - Rapid Test for Hydrophytic Vegetation	
4				X 2 - Dominance Test is >50%	
5				X 3 - Prevalence Index is $\leq 3.0^{1}$	
6		·		Problematic Hydrophytic Vegetation ¹ (Explain)	
·	0	= Total Cover		1 repletification (Explain)	
50% of total cover		20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size: 30 ft.)		20% of total cover.		be present, unless disturbed or problematic.	
1. Avicennia germinans	45	Yes	OBL	Definitions of Five Vegetation Strata:	
	10	No	OBL	Tree - Woody plants, excluding woody vines,	
2. Spartina alterniflora					
3. Salicornia depressa	5	No	OBL	approximately 20 ft (6m) or more in height and 3 in.	
4		· -		(7.6 cm) or larger in diameter at breast height (DBH).	
5				Sapling - Woody plants, excluding woody vines,	
6				approximately 20 ft (6 m) or more in height and less	
7	-	·		than 3 in. (7.6 cm) DBH.	
8				than 3 in. (7.0 cm) DDH.	
9		. <u>— </u>		Shrub - Woody plants, excluding woody vines,	
10				31 7	
11				approximately 3 to 20 ft (1 to 6 m) in height.	
	60	= Total Cover		Hart All back and the state of	
50% of total cover	:30	20% of total cover:	12	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size: 30 ft.)				herbaceous vines, regardless of size, <u>and</u> woody	
1. None Observed		<u> </u>		plants, except woody vines, less than approximately	
2		. <u> </u>		3 ft (1 m) in height.	
3		. <u> </u>			
4				Woody vine - All woody vines, regardless of height.	
5					
	0	= Total Cover		Hydrophytic	
50% of total cover	: 0	20% of total cover:	0	Vegetation	
		•		Present? Yes X No	
Remarks: (if observed, list morphological adapta	tions below).			
A positive indication of hydrophytic vegetation wa	s observed	(>50% of dominant	species index	xed as OBL, FACW, or FAC).	
A positive indication of hydrophytic vegetation wa	s observed	(Prevalence Index is	s ≤ 3.00).		

Depth	Matrix			Redox I	eatures			
inches)	Color (moist)	%	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks
0-3	2.5Y 5/1	100	None				Sandy Loam	
3-20	N 4	_98_	10YR_5/4_	_2_	<u>C</u>	PL	Sandy Loam	
	oncentration, D=Dep	lotion DM-	- Poducod Matrix N		d Sand Crains	2l contion: E	PL=Pore Lining, M=Matrix	· · · · · · · · · · · · · · · · · · ·
	s Indicators: (Appl					Location. F	<u> </u>	•matic Hydric Soils ³ :
Histoso	`	icable to al	•		Surface (S8) (L l	RRS T II)	1 cm Muck (A9)	<u> </u>
	Epipedon (A2)				e (S9) (LRR S ,		2 cm Muck (A10	
	Histic (A3)				neral (F1) (LRR			(F18) (outside MLRA 150A ,
	en Sulfide (A4)			Gleyed M		σ,		plain Soils (F19) (LRR P, S,
	ed Layers (A5)			ed Matrix (, ,			ht Loamy Soils (F20)
	c Bodies (A6) (LRR I	P, T, U)		Dark Surfa	•		(MLRA 153B)	(1 (1
	lucky Mineral (A7) (L				urface (F7)		Red Parent Mate	erial (TF2)
	Presence (A8) (LRR			Depressio	` '			ark Surface (TF12)
	luck (A9) (LRR P, T)	-		10) (LRR	. ,		Other (Explain ir	, ,
 Deplete	ed Below Dark Surfa	ce (A11)			(F11) (MLRA 15	51)		,
Thick D	Dark Surface (A12)	, ,	Iron-Ma	anganese	Masses (F12) (LRR O, P, T)	³ Indicators of	hydrophytic vegetation and
Coast F	Prairie Redox (A16) ((MLRA 150	A) Umbrio	Surface (F13) (LRR P, T ,	, U)	-	ology must be present,
	Mucky Mineral (S1)				7) (MLRA 151)		unless disturb	ed or problematic.
X Sandy	Gleyed Matrix (S4)		Reduc	ed Vertic (F18) (MLRA 15 0	0A, 150B)		
X Sandy	Redox (S5)		Piedmo	ont Floodp	lain Soils (F19)	(MLRA 149A)		
Strippe	d Matrix (S6)		Anoma	lous Brigh	t Loamy Soils (F	20) (MLRA 14	9A, 153C, 153D)	
Dark S	urface (S7) (LRR P,	S, T, U)						
Restrictive	Layer (if observed)	:						
Type:								
Depth (in	iches):					Hydri	c Soil Present? Yes _	X No
Remarks:								
A positive in	dication of hydric soi	l was obser	ved.					

Project/Site:	Bluewater SPM	Coun	ity:	Nueces	Sampling Date:	February 5, 2019
Applicant/Owner:	Lloyd Engineerir	ng	State:	Texas	Sample Point:	DPB031_U
Investigator(s): C.	Bailey and N.	Trivino Secti	ion, Township, Ra	ange:	N/A	
Landform (hillslope, terrace, etc		Loca	al relief (concave,	convex, none): _	None Slope	e (%): <u>0-5</u>
Subregion (LRR or MLRA):	None	L	_at:27.86494	<u>43</u> Long: _	-97.082841 D	atum: North American Datum 1983
Soil Map Unit Name:		loam, rarely flooded			Classification:	E2USP
Are climatic / hydrologic condition	ons on the site typical for this tir				explain in Remarks.)	
Are Vegetation No,					tances" present? Ye	
Are Vegetation No,	Soil No, or Hydrology	No naturally pro	oblematic?	(If needed,	explain any answers i	n Remarks.)
SUMMARY OF FINDIN	GS - Attach site map s	showing samp	oling point lo	cations, tran	isects, importar	nt features, etc.
Hydrophytic Vegetation Prese	nt? Yes N	lo <u>X</u>				
Hydric Soil Present?			Is the Sampled	Area		
Wetland Hydrology Present?			within a Wetlan		res N	lo X
, 3,						
Remarks:						
This was to 4 and a day on the state of				_		
I his point was determined	not to be within a wetland due	to the lack of all thre	ee wetland criteria	3 .		
HYDROLOGY						
Wetland hydrology Indic	ators:			Secor	ndary Indicators (minin	num of two required)
Primary Indicators (minimu	ım of one is required; check all	that apply)			Surface Soil Cracks (B6)
Surface Water (A1)	/	Aquatic Fauna (B13)		Sparsely Vegetated C	Concave Surface (B8)
High Water Table (A	A2) !	Marl Deposits (B15)	(LRR U)		Drainage Patterns (B	10)
Saturation (A3)		Hydrogen Sulfide Od	, ,		Moss Trim Lines (B16	•
Water Marks (B1)		Oxidized Rhizosphe	_	· · · —	Dry-Season Water Ta	, ,
Sediment Deposits	· · · —	Presence of Reduce	, ,		Crayfish Burrows (C8	
Drift Deposits (B3)		Recent Iron Reduction		(C6)	Saturation Visible on	, ,
Algal Mat or Crust (I	· —	Thin Muck Surface (Geomorphic Position	, ,
Iron Deposits (B5)		Other (Explain in Re	emarks)		Shallow Aquitard (D3)	
	n Aerial Imagery (B7)				FAC-Neutral Test (D5	•
Water-Stained Leav	res (B9)				Sphagnum moss (D8)	(LRR 1, U)
Field Observations:						
	res No X	Depth (inches):	N/A			
	res No X	Depth (inches):	>20			
	/es NoX	Depth (inches): _		etland Hydrology	Present? Yes	No X
(includes capillary fringe)	10 <u>X</u>	Depar (mones)	<u> </u>	chana riyarology		NOX
Describe Recorded Data (stream gauge, monitoring well,	aerial photos, previo	ous inspections).	if available:		
(g		,,			
Remarks:						
No positive indication of w	etland hydrology was observed.					

Sampling Point: DPB031_U

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft \	% cover	Species?	Status	Number of Dominant Species	
1 Name Observed		70 COVE	Оресіез:	Otatus	·	
					That Are OBL, FACW, or FAC: (A	٦)
2						
3					Total Number of Dominant	
4					Species Across All Strata: 0 (E	3)
5						
6					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC: (A	√B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1 Nana Observed					Total % Cover of: Multiply by:	
2.					OBL species 0 x 1 = 0	_
					FACW species	_
3						_
4						_
5					FACU species 0 x 4 = 0	_
6					UPL species 0 x 5 = 0	_
			= Total Cover		Column Totals: 0 (A) 0	_ (B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = N/A	_
1. None Observed						
2.	_				Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
					2 - Dominance Test is >50%	
4					3 - Prevalence Index is ≤ 3.0 ¹	
5.					Problematic Hydrophytic Vegetation ¹ (Explain)	
6					Problematic Hydrophytic Vegetation (Explain)	
			= Total Cover		4	
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
1. None Observed					Definitions of Five Vegetation Strata:	
2					Tree - Woody plants, excluding woody vines,	
3					approximately 20 ft (6m) or more in height and 3 in.	
4.			· · · · · · · · · · · · · · · · · · ·	-	(7.6 cm) or larger in diameter at breast height (DBH).	
5.						
6.					Sapling - Woody plants, excluding woody vines,	
			-		approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8						
9					Shrub - Woody plants, excluding woody vines,	
10					approximately 3 to 20 ft (1 to 6 m) in height.	
11						
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:	30 ft)				herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2					3 ft (1 m) in height.	
3.						
4.	-				Woody vine - All woody vines, regardless of height.	
5.	•					
o		0	= Total Cover		Hydrophytic	
	50% of total cover:		20% of total cover:	0	Vegetation	
	50% of total cover.		20% of total cover.		-	
					Present? Yes NoX	
Remarks: (if observed, list m	orphological adaptat	ions below).			
No positive indication of hydro	phytic vegetation wa	as observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).	
peenare maneauen er nyan	prijus regetation in		a (=0070 0. aona	. 0000.00	5.50 45 1716 5. 4.151).	
No vogetation present						
No vegetation present.						

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand, Reduced Vertic (F18) (MLRA 150A, 150B) Type: D=Depth (Inches): Type: D=Depth (Inc	Depth inches)	Color (moist)	% Color	(moist)	%	Type ¹	Loc ²	Texture	Remarks
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (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 O) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A, Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Pledmont Floodplain Soils (F19) (LRR P, S, Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) (MLRA 153B) Red Parent Material (TF2) Pledmont Ploodplain Soils (F19) (LRR P, S, Anomalous Bright Loamy Soils (F20) (MLRA 153B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F6) (MLRA 153B) Red Parent Material (TF2) Pledmont Ploodplain Soils (F20) (MLRA 153B) Pledmont Ploodplain Soils (F20) (MLRA 153B) Pledmont Floodplain Soils (F19) (LRR P, T) Pledmont Floodplain Soils (F20) (MLRA 150A) Pledmont Floodplain Soils (F20) (MLRA 150A) Pledmont Floodplain Soils (F12) (LRR O, P, T) Pledmont Floodplain Soils (F19) (MLRA 149A) Pledmont Floodplain Soils (F19) (MLRA 149A) Pledmont Floodplain Soils (F19) (MLRA 149A) Pledmont Floodplain Soils (F20) (MLRA 149A) Pledmont Floodplain								Sandy Loam	
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histosol (A2) Histosol (A2) Histosol (A3) Histosol (A3) Histosol (A4) Histosol (A2) Histosol (A4) Histosol (A6) (LRR O, T, U) Histosol (A4) Histosol (A6) (LRR O, T, U) Histosol (A6) (LRR O, U) Histosol (A6)									
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histosol (A2) Histosol (A2) Histosol (A3) Histosol (A3) Histosol (A4) Histosol (A2) Histosol (A4) Histosol (A6) (LRR O, T, U) Histosol (A4) Histosol (A6) (LRR O, T, U) Histosol (A6) (LRR O, U) Histosol (A6)									
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histosol (A2) Histosol (A2) Histosol (A3) Histosol (A3) Histosol (A4) Histosol (A2) Histosol (A4) Histosol (A6) (LRR O, T, U) Histosol (A4) Histosol (A6) (LRR O, T, U) Histosol (A6) (LRR O, U) Histosol (A6)									
Histosol (A1)	Type: C=Co	 oncentration, D=Depleti	on, RM=Reduce	d Matrix, M	—— IS=Masked	Sand Grains.	² Location: Pl		
Histic Epipedon (A2) Black Histic (A3) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR P, T, U) Depleted Dark Surface (F7) 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 Gleyed Matrix (S4) Sandy Redox (S5) Depleted Dark Surface (F13) (LRR P, T, U) Depleted Dark Surface (F7) Marl (F10) (LRR U) Depleted Dorric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Delta Ochric (F17) (MLRA 151) Sandy Mucky Mineral (S1) (LRR O, S) Stripped Matrix (S4) Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Thick Dark Surface (A12) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Anomalous Bright Loamy Soil (Present? Yes No X	lydric Soils	Indicators: (Applicat	ble to all LRRs,			,			•
Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A, Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) 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) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) 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) Sandy Redox (S5) Piedmont Floodplain Soils (F190) Piedmont Floodplain Soils (F190) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X		, ,	_						
Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Scord 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 Redox (S5) Sandy Redox (S5) Derleted Dark Surface (F7) Redox Depressions (F8) Depleted Dark Surface (F7) Mari (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Sandy Redox (S5) Dark Surface (S7) (LRR O, F, T, U) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	Histic E	pipedon (A2)	_						
Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A7) (LRR P, T, U) Stratifi		` '	_		-		O)		, , , ,
Organic Bodies (A6) (LRR P, T, U) Sem Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Dark Surface (F7) 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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, T, U) Delta Ochric (F18) (MLRA 150B) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes NoX Remarks:	Hydroge	en Sulfide (A4)	_	Loamy	Gleyed Mat	rix (F2)			
5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Jindicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Delta Ochric (F17) (MLRA 151) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	Stratifie	d Layers (A5)	_	Deplete	ed Matrix (F	3)		Anomalous Brig	ht Loamy Soils (F20)
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) Depleted Ochric (F11) (MLRA 151) 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 (F13) (MLRA 150A) Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	Organic	Bodies (A6) (LRR P, T	⁻ , U) _	Redox	Dark Surfac	e (F6)		(MLRA 153B)	
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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Jepleta Ochric (F13) (LRR P, T, U) Delta Ochric (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	5 cm Mi	ucky Mineral (A7) (LRR	P, T, U) _	Deplete	ed Dark Surf	ace (F7)		Red Parent Mat	erial (TF2)
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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) January (LRR O, P, T) Wetland hydrology must be present, unless disturbed or problematic. Piedmont F100 (MLRA 150A) Anomalous Bright Loamy Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	Muck P	resence (A8) (LRR U)	_	Redox	Depressions	s (F8)		Very Shallow Da	ark Surface (TF12)
Thick Dark Surface (A12)	1 cm Mi	uck (A9) (LRR P, T)	_	Marl (F	10) (LRR U))		Other (Explain i	n 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) Restrictive Layer (if observed): Type: Depth (inches): Denta Ochric (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 (S1) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	Deplete	d Below Dark Surface ((A11) _	Deplete	ed Ochric (F	11) (MLRA 1 5	51)		
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) Restrictive Layer (if observed): Type: Depth (inches): 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) Hydric Soil Present? Yes No X	Thick D	ark Surface (A12)	_	Iron-Ma	inganese M	asses (F12) (LRR O, P, T)		
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) Restrictive Layer (if observed): Type: Depth (inches): Depth (inches): Hydric Soil Present? Yes No X	Coast P	Prairie Redox (A16) (ML	.RA 150A)	Umbric	Surface (F1	3) (LRR P, T ,	U)		
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:	Sandy N	Mucky Mineral (S1) (LR	R O, S)	Delta C	chric (F17)	(MLRA 151)		unless disturi	oed or problematic.
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	Sandy 0	Gleyed Matrix (S4)	_	Reduce	ed Vertic (F1	8) (MLRA 15 0	0A, 150B)		
Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Park Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): No X Remarks:		. , ,	_	— Piedmo	nt Floodplai	n Soils (F19)	(MLRA 149A)		
Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X		, ,	_		=	, ,		A, 153C, 153D)	
Type: Bepth (inches): No X		` ,	T, U)		· ·	, ,	, .	,	
Depth (inches): NoX Remarks:	Restrictive I	_ayer (if observed):							
Depth (inches): NoX Remarks:	Type:								
Remarks:		ches):					Hydric	Soil Present? Yes	No X
	. ,	,							
No positive indication of hydric soils was observed.	Remarks:								
	lo positive in	ndication of hydric soils	was observed.						

Project/Site:	Bluewater SPM	Count	ty: Nuece	es S	Sampling Date:	February 5, 2019
Applicant/Owner:	Lloyd Engineeri	ing	State:	Texas	Sample Point:	DPB032_PEM
Investigator(s): C.	Bailey and N	I. Trivino Section	on, Township, Range:		N/A	
Landform (hillslope, terrace, et		ter Local	I relief (concave, conve	x, none): N	lone Slope (%):0-5
Subregion (LRR or MLRA):	None	L	at: 27.865049	Long:	7.082707 Da	tum: North American Datum 1983
Soil Map Unit Name:	ljam clay	y loam, rarely flooded		NWI Class	ification:	N/A
Are climatic / hydrologic condit	ions on the site typical for this ti	•	s / No) YES	`	ain in Remarks.)	
Are Vegetation No			disturbed? Are "Norr		•	
Are Vegetation No	,Soil No, or Hydrology	No naturally pro	oblematic?	(If needed, expla	ain any answers in	Remarks.)
SUMMARY OF FINDIN	NGS - Attach site map	showing samp	ling point location	ons, transec	ts, important	features, etc.
						1
Hydrophytic Vegetation Prese	ent? Yes X I	No				
Hydric Soil Present?			Is the Sampled Area			
Wetland Hydrology Present?			within a Wetland?	Yes	X No	
, 0,				_		
Remarks:						
This point was determined	d to be within a wetland due to t	the presence of all 3 v	wetland criteria			
Trilo point was asternimos	a to be within a welland due to t	ine presentes or all o	Wottaria oritoria.			
LIVEROLOGY						
HYDROLOGY Wetland hydrology India				0	In the state of the last	
	um of one is required; check all	that apply)			•	m of two required)
Surface Water (A1)		Aquatic Fauna (B13)			ace Soil Cracks (Be	ncave Surface (B8)
High Water Table (Marl Deposits (B15)			nage Patterns (B10	` '
X Saturation (A3)		Hydrogen Sulfide Oc			s Trim Lines (B16)	')
Water Marks (B1)			res on Living Roots(C3)		Season Water Tab	le (C2)
Sediment Deposits		Presence of Reduce	- , ,		fish Burrows (C8)	()
Drift Deposits (B3)	· · · —		on in Tilled Soils (C6)		ration Visible on A	erial Imagery (C9)
Algal Mat or Crust (Thin Muck Surface (, ,		morphic Position (E	, ,
Iron Deposits (B5)	· · · · · · · · · · · · · · · · · · ·	Other (Explain in Re	marks)	—— Shal	low Aquitard (D3)	,
Inundation Visible of	on Aerial Imagery (B7)			X FAC	-Neutral Test (D5)	
Water-Stained Lea	ves (B9)			Spha	agnum moss (D8) (LRR T, U)
Field Observations:						
Surface Water Present?	Yes NoX	Depth (inches):	N/A_			
	Yes NoX	Depth (inches):	>20			
	YesX No	Depth (inches):	0 Wetland	Hydrology Pres	sent? Yes	X No
(includes capillary fringe)						
Describe Recorded Data	(stream gauge, monitoring well,	aerial photos, previo	ous inspections), if avail	able:		
Remarks:						
Nomano.						
A positive indication of we	etland hydrology was observed ((at least one primary	indicator).			
Aquatic Fauna: crabs.						

Sampling Point:	DPB032_PEM
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		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft)	% cover	Species?	Status	Number of Dominant Species	
		70 00 101		Otatuo	That Are OBL, FACW, or FAC:1	(Δ)
					That Ale OBE, TAOW, OF TAO.	
2					Total Number of Deminent	
3					Total Number of Dominant	(D)
4					Species Across All Strata: 1	(B)
5						
6			T + 1 0		Percent of Dominant Species	(4.5)
			= Total Cover	_	That Are OBL, FACW, or FAC:	(A/B)
	50% of total cover:	0	20% of total cover:	0	Prevalence Index Worksheet:	
Sapling Stratum (Plot size:	30 ft.)					
1. None Observed					Total % Cover of: Multiply by:	-
2					OBL species 95 x 1 = 95	-
3					FACW species 0	_
4					FAC species 0 x 3 = 0	_
5					FACU species 0 x 4 = 0	
6					UPL species 0 x 5 = 0	—
			= Total Cover		Column Totals: (A) 95	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = 1.00	
1. None Observed						
2					Hydrophytic Vegetation Indicators:	
3					1 - Rapid Test for Hydrophytic Vegetation	
4					X 2 - Dominance Test is >50%	
5					X 3 - Prevalence Index is $\leq 3.0^1$	
6.					Problematic Hydrophytic Vegetation ¹ (Explain)	
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:			•		be present, unless disturbed or problematic.	
1. Avicennia germinans		80	Yes	OBL	Definitions of Five Vegetation Strata:	
Salicornia depressa		15	No	OBL	Tree - Woody plants, excluding woody vines,	
3.					approximately 20 ft (6m) or more in height and 3 in.	
4.					(7.6 cm) or larger in diameter at breast height (DBH).	
					(7.0 dill) of larger in diameter at broadt height (BBH).	
5					Sapling - Woody plants, excluding woody vines,	
6					approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8					,	
9					Shrub - Woody plants, excluding woody vines,	
10					approximately 3 to 20 ft (1 to 6 m) in height.	
11						
	EOO/ of total		= Total Cover	10	Herb - All herbaceous (non-woody) plants, including	
Moody Vine Others (Dist.)		41.5	20% of total cover:	19	herbaceous vines, regardless of size, <u>and</u> woody	
Woody Vine Stratum (Plot size:					plants, except woody vines, less than approximately	
1. None Observed					3 ft (1 m) in height.	
2					o it (1 iii) iii heigitt.	
3	<u> </u>				Woody vine - All woody vines, regardless of height.	
4					violety vine - All woody vines, regardless of height.	ł
5					Hudos abotic	
	F00/ . 54		= Total Cover	0	Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes <u>X</u> No	
Remarks: (if observed, list mo	orphological adaptati	ons below).			
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	species index	ked as OBL, FACW, or FAC).	
, , ,	, 3		(•	- , - , - ,	
A positive indication of hydrop	hytic vegetation was	observed	(Prevalence Index is	s ≤ 3.00)		
positive indication or mydrop	,	3205110U	,	0.00).		

	R P, T, U) (LRR P, T, U R U) T) face (A11)) (MLRA 150) (LRR O, S)	All LRRs, unless of Polyva Thin D Loamy Loamy Deplet Redox Marl (F Deplet Iron-M OA) Delta G Reduc Piedm	Atherwise no alue Below S Dark Surface y Mucky Mine y Gleyed Mat ted Matrix (F x Dark Surfac ted Dark Sur x Depression F10) (LRR U ted Ochric (F Manganese M ic Surface (F Ochric (F17) ced Vertic (F nont Floodpla	oted.) Surface (S8) (LI c (S9) (LRR S, - eral (F1) (LRR trix (F2) cc (F6) rface (F7) ns (F8) J) F11) (MLRA 15 Masses (F12) (I c (13) (LRR P, T, c (MLRA 151) c (MLRA 150) dain Soils (F19) (RR S, T, U) T, U) O) LRR O, P, T) U) OA, 150B) (MLRA 149A) (20) (MLRA 148	1 cm Muck (A9 2 cm Muck (A1 Reduced Vertice Piedmont Floo Anomalous Bri (MLRA 153B) Red Parent Ma Very Shallow D Other (Explain	blematic Hydric Soils ³ : (a) (LRR O) (b) (LRR S) (c) (F18) (outside MLRA 150A, (dplain Soils (F19) (LRR P, S, right Loamy Soils (F20) (aterial (TF2) (aterial (TF2) (aterial (TF12) (aterial
Type: C=Concentration, D=D ydric Soils Indicators: (Ap Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRI 5 cm Mucky Mineral (A7) Muck Presence (A8) (LRR P, Depleted Below Dark Sur Thick Dark Surface (A12) Coast Prairie Redox (A16) Sandy Mucky Mineral (S1 Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR II estrictive Layer (if observe Type: Depth (inches):	epletion, RM= epletion, RM= plicable to al R P, T, U) (LRR P, T, U T) face (A11)) (MLRA 150) (LRR O, S) P, S, T, U) d):	=Reduced Matrix,	MS=Masked witherwise no alue Below S Dark Surface y Mucky Mine y Gleyed Mat ted Matrix (F x Dark Surfac ted Dark Surfac ted Dark Surfac ted Ochric (F Manganese M ic Surface (F Ochric (F17) ced Vertic (F- nont Floodpla	Surface (S8) (LI s (S9) (LRR S, reral (F1) (LRR trix (F2) s (F8) J) s (F8) J) face (F7) s (F8) J) fasses (F12) (I fa) (LRR P, T, 1) (MLRA 151) fals (MLRA 150) fals (MLRA 150) fals (MLRA 150)	² Location: Pl RR S, T, U) T, U) O) LRR O, P, T) U) OA, 150B) (MLRA 149A) (20) (MLRA 145	L=Pore Lining, M=Mat Indicators for Prot 1 cm Muck (AS 2 cm Muck (AT Reduced Verti Piedmont Floo Anomalous Bri (MLRA 153B) Red Parent Ma Very Shallow I Other (Explain 3Indicators of wetland hyd unless distu PA, 153C, 153D)	blematic Hydric Soils ³ : (a) (LRR O) (b) (LRR S) (c) (F18) (outside MLRA 150A, (dplain Soils (F19) (LRR P, S, right Loamy Soils (F20) (aterial (TF2) (aterial (TF2) (aterial (TF12) (aterial
ydric Soils Indicators: (Ap Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRI 5 cm Mucky Mineral (A7) Muck Presence (A8) (LRI 1 cm Muck (A9) (LRR P, Depleted Below Dark Sur Thick Dark Surface (A12) Coast Prairie Redox (A16) Sandy Mucky Mineral (S1 Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR I estrictive Layer (if observery pet of the company of the co	R P, T, U) (LRR P, T, U R U) T) face (A11)) (MLRA 150) (LRR O, S)	All LRRs, unless of Polyva Polyva Thin D Loamy Loamy Deplet Redox Marl (F Deplet Iron-M Umbrid) Delta (F Reduce Piedm Anoma	Atherwise no alue Below S Dark Surface y Mucky Mine y Gleyed Mat ted Matrix (F x Dark Surfac ted Dark Sur x Depression F10) (LRR U ted Ochric (F Manganese M ic Surface (F Ochric (F17) ced Vertic (F nont Floodpla	oted.) Surface (S8) (LI c (S9) (LRR S, - eral (F1) (LRR trix (F2) cc (F6) rface (F7) ns (F8) J) F11) (MLRA 15 Masses (F12) (I c (13) (LRR P, T, c (MLRA 151) c (MLRA 150) dain Soils (F19) (RR S, T, U) T, U) O) LRR O, P, T) U) OA, 150B) (MLRA 149A) (20) (MLRA 148	Indicators for Prot 1 cm Muck (AS 2 cm Muck (Af Reduced Vertic Piedmont Floo Anomalous Bri (MLRA 153B) Red Parent Ma Very Shallow E Other (Explain 3 Indicators of wetland hyd unless distu DA, 153C, 153D)	blematic Hydric Soils ³ : (a) (LRR O) (b) (LRR S) (c) (F18) (outside MLRA 150A, (dplain Soils (F19) (LRR P, S, right Loamy Soils (F20) (aterial (TF2) (aterial (TF2) (aterial (TF12) (aterial
ydric Soils Indicators: (Ap Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRI 5 cm Mucky Mineral (A7) Muck Presence (A8) (LRI 1 cm Muck (A9) (LRR P, Depleted Below Dark Sur Thick Dark Surface (A12) Coast Prairie Redox (A16) Sandy Mucky Mineral (S1 Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR I estrictive Layer (if observery pet of the company of the co	R P, T, U) (LRR P, T, U R U) T) face (A11)) (MLRA 150) (LRR O, S)	All LRRs, unless of Polyva Polyva Thin D Loamy Loamy Deplet Redox Marl (F Deplet Iron-M Umbrid) Delta (F Reduce Piedm Anoma	Atherwise no alue Below S Dark Surface y Mucky Mine y Gleyed Mat ted Matrix (F x Dark Surfac ted Dark Sur x Depression F10) (LRR U ted Ochric (F Manganese M ic Surface (F Ochric (F17) ced Vertic (F nont Floodpla	oted.) Surface (S8) (LI c (S9) (LRR S, - eral (F1) (LRR trix (F2) cc (F6) rface (F7) ns (F8) J) F11) (MLRA 15 Masses (F12) (I c (13) (LRR P, T, c (MLRA 151) c (MLRA 150) dain Soils (F19) (RR S, T, U) T, U) O) LRR O, P, T) U) OA, 150B) (MLRA 149A) (20) (MLRA 148	Indicators for Prot 1 cm Muck (AS 2 cm Muck (Af Reduced Vertic Piedmont Floo Anomalous Bri (MLRA 153B) Red Parent Ma Very Shallow E Other (Explain 3 Indicators of wetland hyd unless distu DA, 153C, 153D)	blematic Hydric Soils ³ : (a) (LRR O) (b) (LRR S) (c) (F18) (outside MLRA 150A, (dplain Soils (F19) (LRR P, S, right Loamy Soils (F20) (aterial (TF2) (aterial (TF2) (aterial (TF12) (aterial
ydric Soils Indicators: (Ap Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRI 5 cm Mucky Mineral (A7) Muck Presence (A8) (LRI 1 cm Muck (A9) (LRR P, Depleted Below Dark Sur Thick Dark Surface (A12) Coast Prairie Redox (A16) Sandy Mucky Mineral (S1 Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR I estrictive Layer (if observery pet of the company of the co	R P, T, U) (LRR P, T, U R U) T) face (A11)) (MLRA 150) (LRR O, S)	All LRRs, unless of Polyva Polyva Thin D Loamy Loamy Deplet Redox Marl (F Deplet Iron-M Umbrid) Delta (F Reduce Piedm Anoma	Atherwise no alue Below S Dark Surface y Mucky Mine y Gleyed Mat ted Matrix (F x Dark Surfac ted Dark Sur x Depression F10) (LRR U ted Ochric (F Manganese M ic Surface (F Ochric (F17) ced Vertic (F nont Floodpla	oted.) Surface (S8) (LI c (S9) (LRR S, - eral (F1) (LRR trix (F2) cc (F6) rface (F7) ns (F8) J) F11) (MLRA 15 Masses (F12) (I c (13) (LRR P, T, c (MLRA 151) c (MLRA 150) dain Soils (F19) (RR S, T, U) T, U) O) LRR O, P, T) U) OA, 150B) (MLRA 149A) (20) (MLRA 148	Indicators for Prot 1 cm Muck (AS 2 cm Muck (Af Reduced Vertic Piedmont Floo Anomalous Bri (MLRA 153B) Red Parent Ma Very Shallow E Other (Explain 3 Indicators of wetland hyd unless distu DA, 153C, 153D)	blematic Hydric Soils ³ : (a) (LRR O) (b) (LRR S) (c) (F18) (outside MLRA 150A, (dplain Soils (F19) (LRR P, S, right Loamy Soils (F20) (aterial (TF2) (aterial (TF2) (aterial (TF12) (aterial
ydric Soils Indicators: (Ap Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRI 5 cm Mucky Mineral (A7) Muck Presence (A8) (LRI 1 cm Muck (A9) (LRR P, Depleted Below Dark Sur Thick Dark Surface (A12) Coast Prairie Redox (A16) Sandy Mucky Mineral (S1 Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR I estrictive Layer (if observery pet of the company of the co	R P, T, U) (LRR P, T, U R U) T) face (A11)) (MLRA 150) (LRR O, S)	All LRRs, unless of Polyva Polyva Thin D Loamy Loamy Deplet Redox Marl (F Deplet Iron-M Umbrid) Delta (F Reduce Piedm Anoma	Atherwise no alue Below S Dark Surface y Mucky Mine y Gleyed Mat ted Matrix (F x Dark Surfac ted Dark Sur x Depression F10) (LRR U ted Ochric (F Manganese M ic Surface (F Ochric (F17) ced Vertic (F nont Floodpla	oted.) Surface (S8) (LI c (S9) (LRR S, - eral (F1) (LRR trix (F2) cc (F6) rface (F7) ns (F8) J) F11) (MLRA 15 Masses (F12) (I c (13) (LRR P, T, c (MLRA 151) c (MLRA 150) dain Soils (F19) (RR S, T, U) T, U) O) LRR O, P, T) U) OA, 150B) (MLRA 149A) (20) (MLRA 148	Indicators for Prot 1 cm Muck (AS 2 cm Muck (Af Reduced Vertic Piedmont Floo Anomalous Bri (MLRA 153B) Red Parent Ma Very Shallow E Other (Explain 3 Indicators of wetland hyd unless distu DA, 153C, 153D)	blematic Hydric Soils ³ : (a) (LRR O) (b) (LRR S) (c) (F18) (outside MLRA 150A, (dplain Soils (F19) (LRR P, S, right Loamy Soils (F20) (aterial (TF2) (aterial (TF2) (aterial (TF12) (aterial
ydric Soils Indicators: (Ap Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRI 5 cm Mucky Mineral (A7) Muck Presence (A8) (LRI 1 cm Muck (A9) (LRR P, Depleted Below Dark Sur Thick Dark Surface (A12) Coast Prairie Redox (A16) Sandy Mucky Mineral (S1 Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR I estrictive Layer (if observery pet of the company of the co	R P, T, U) (LRR P, T, U R U) T) face (A11)) (MLRA 150) (LRR O, S)	All LRRs, unless of Polyva Polyva Thin D Loamy Loamy Deplet Redox Marl (F Deplet Iron-M Umbrid) Delta (F Reduce Piedm Anoma	Atherwise no alue Below S Dark Surface y Mucky Mine y Gleyed Mat ted Matrix (F x Dark Surfac ted Dark Sur x Depression F10) (LRR U ted Ochric (F Manganese M ic Surface (F Ochric (F17) ced Vertic (F nont Floodpla	oted.) Surface (S8) (LI c (S9) (LRR S, - eral (F1) (LRR trix (F2) cc (F6) rface (F7) ns (F8) J) F11) (MLRA 15 Masses (F12) (I c (13) (LRR P, T, c (MLRA 151) c (MLRA 150) dain Soils (F19) (RR S, T, U) T, U) O) LRR O, P, T) U) OA, 150B) (MLRA 149A) (20) (MLRA 148	Indicators for Prot 1 cm Muck (AS 2 cm Muck (Af Reduced Vertic Piedmont Floo Anomalous Bri (MLRA 153B) Red Parent Ma Very Shallow E Other (Explain 3 Indicators of wetland hyd unless distu DA, 153C, 153D)	blematic Hydric Soils ³ : (a) (LRR O) (b) (LRR S) (c) (F18) (outside MLRA 150A, (dplain Soils (F19) (LRR P, S, right Loamy Soils (F20) (aterial (TF2) (aterial (TF2) (aterial (TF12) (aterial
ydric Soils Indicators: (Ap Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRI 5 cm Mucky Mineral (A7) Muck Presence (A8) (LRI 1 cm Muck (A9) (LRR P, Depleted Below Dark Sur Thick Dark Surface (A12) Coast Prairie Redox (A16) Sandy Mucky Mineral (S1 Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR I estrictive Layer (if observery pet of the company of the co	R P, T, U) (LRR P, T, U R U) T) face (A11)) (MLRA 150) (LRR O, S)	All LRRs, unless of Polyva Polyva Thin D Loamy Loamy Deplet Redox Marl (F Deplet Iron-M Umbrid) Delta (F Reduce Piedm Anoma	Atherwise no alue Below S Dark Surface y Mucky Mine y Gleyed Mat ted Matrix (F x Dark Surfac ted Dark Sur x Depression F10) (LRR U ted Ochric (F Manganese M ic Surface (F Ochric (F17) ced Vertic (F nont Floodpla	oted.) Surface (S8) (LI c (S9) (LRR S, - eral (F1) (LRR trix (F2) cc (F6) rface (F7) ns (F8) J) F11) (MLRA 15 Masses (F12) (I c (13) (LRR P, T, c (MLRA 151) c (MLRA 150) dain Soils (F19) (RR S, T, U) T, U) O) LRR O, P, T) U) OA, 150B) (MLRA 149A) (20) (MLRA 148	Indicators for Prot 1 cm Muck (AS 2 cm Muck (Af Reduced Vertic Piedmont Floo Anomalous Bri (MLRA 153B) Red Parent Ma Very Shallow E Other (Explain 3 Indicators of wetland hyd unless distu DA, 153C, 153D)	blematic Hydric Soils ³ : (a) (LRR O) (b) (LRR S) (c) (F18) (outside MLRA 150A, (dplain Soils (F19) (LRR P, S, right Loamy Soils (F20) (aterial (TF2) (aterial (TF2) (aterial (TF12) (aterial
ydric Soils Indicators: (Ap Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRI 5 cm Mucky Mineral (A7) Muck Presence (A8) (LRI 1 cm Muck (A9) (LRR P, Depleted Below Dark Sur Thick Dark Surface (A12) Coast Prairie Redox (A16) Sandy Mucky Mineral (S1 Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR I estrictive Layer (if observery pet of the company of the co	R P, T, U) (LRR P, T, U R U) T) face (A11)) (MLRA 150) (LRR O, S)	All LRRs, unless of Polyva Polyva Thin D Loamy Loamy Deplet Redox Marl (F Deplet Iron-M Umbrid) Delta (F Reduce Piedm Anoma	Atherwise no alue Below S Dark Surface y Mucky Mine y Gleyed Mat ted Matrix (F x Dark Surfac ted Dark Sur x Depression F10) (LRR U ted Ochric (F Manganese M ic Surface (F Ochric (F17) ced Vertic (F nont Floodpla	oted.) Surface (S8) (LI c (S9) (LRR S, - eral (F1) (LRR trix (F2) cc (F6) rface (F7) ns (F8) J) F11) (MLRA 15 Masses (F12) (I c (13) (LRR P, T, c (MLRA 151) c (MLRA 150) dain Soils (F19) (RR S, T, U) T, U) O) LRR O, P, T) U) OA, 150B) (MLRA 149A) (20) (MLRA 148	Indicators for Prot 1 cm Muck (AS 2 cm Muck (Af Reduced Vertic Piedmont Floo Anomalous Bri (MLRA 153B) Red Parent Ma Very Shallow E Other (Explain 3 Indicators of wetland hyd unless distu DA, 153C, 153D)	blematic Hydric Soils ³ : (a) (LRR O) (b) (LRR S) (c) (F18) (outside MLRA 150A, (dplain Soils (F19) (LRR P, S, right Loamy Soils (F20) (aterial (TF2) (aterial (TF2) (aterial (TF12) (aterial
ydric Soils Indicators: (Ap Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRI 5 cm Mucky Mineral (A7) Muck Presence (A8) (LRI 1 cm Muck (A9) (LRR P, Depleted Below Dark Sur Thick Dark Surface (A12) Coast Prairie Redox (A16) Sandy Mucky Mineral (S1 Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR I estrictive Layer (if observery pet of the company of the co	R P, T, U) (LRR P, T, U R U) T) face (A11)) (MLRA 150) (LRR O, S) P, S, T, U) d):	All LRRs, unless of Polyva Polyva Thin D Loamy Loamy Deplet Redox Marl (F Deplet Iron-M Umbrid) Delta (F Reduce Piedm Anoma	Atherwise no alue Below S Dark Surface y Mucky Mine y Gleyed Mat ted Matrix (F x Dark Surfac ted Dark Surfac x Depression F10) (LRR U ted Ochric (F Manganese M ic Surface (F Ochric (F17) ced Vertic (F nont Floodpla	oted.) Surface (S8) (LI c (S9) (LRR S, - eral (F1) (LRR trix (F2) cc (F6) rface (F7) ns (F8) J) F11) (MLRA 15 Masses (F12) (I c (13) (LRR P, T, c (MLRA 151) c (MLRA 150) dain Soils (F19) (RR S, T, U) T, U) O) LRR O, P, T) U) OA, 150B) (MLRA 149A) (20) (MLRA 148	Indicators for Prot 1 cm Muck (AS 2 cm Muck (Af Reduced Vertic Piedmont Floo Anomalous Bri (MLRA 153B) Red Parent Ma Very Shallow E Other (Explain 3 Indicators of wetland hyd unless distu DA, 153C, 153D)	blematic Hydric Soils ³ : (a) (LRR O) (b) (LRR S) (c) (F18) (outside MLRA 150A, (dplain Soils (F19) (LRR P, S, right Loamy Soils (F20) (aterial (TF2) (aterial (TF2) (aterial (TF12) (aterial
Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRI 5 cm Mucky Mineral (A7) Muck Presence (A8) (LRI 1 cm Muck (A9) (LRR P, Depleted Below Dark Sur Thick Dark Surface (A12) Coast Prairie Redox (A16) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR I estrictive Layer (if observery Type: Depth (inches):	R P, T, U) (LRR P, T, U R U) T) face (A11)) (MLRA 150) (LRR O, S) P, S, T, U)	Polyva Thin D Loamy Loamy Deplet Redox Marl (f Deplet Iron-M Umbric Reduc Piedm Anoma	alue Below S Dark Surface y Mucky Mine y Gleyed Mat ted Matrix (F x Dark Surface ted Dark Surface x Depression F10) (LRR U ted Ochric (F Manganese M ic Surface (F Ochric (F17) ced Vertic (F- nont Floodpla	Surface (S8) (LI (S9) (LRR S, - eral (F1) (LRR trix (F2) (S3) ce (F6) rface (F7) as (F8) (J) F11) (MLRA 15 Masses (F12) (I F13) (LRR P, T, (MLRA 151) (18) (MLRA 150) (ain Soils (F19) (I	T, U) O) LRR O, P, T) U) OA, 150B) (MLRA 149A) (20) (MLRA 145	1 cm Muck (AS 2 cm Muck (A1 Reduced Vertic Piedmont Floo Anomalous Bri (MLRA 153B) Red Parent Ma Very Shallow I Other (Explain 3Indicators of wetland hyd unless distu	9) (LRR O) 10) (LRR S) c (F18) (outside MLRA 150A, dplain Soils (F19) (LRR P, S, ight Loamy Soils (F20) aterial (TF2) Dark Surface (TF12) in Remarks) of hydrophytic vegetation and rology must be present, rbed or problematic.
Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRI 5 cm Mucky Mineral (A7) Muck Presence (A8) (LRI 1 cm Muck (A9) (LRR P, Depleted Below Dark Sur Thick Dark Surface (A12) Coast Prairie Redox (A16) Sandy Mucky Mineral (S1 Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR I estrictive Layer (if observery Type: Depth (inches):	(LRR P, T, U R U) T) face (A11)) (MLRA 150) (LRR O, S) P, S, T, U)	Thin D Loamy Loamy Deplet Redox Marl (f Deplet Iron-M OA) Detta G Reduc Piedm Anoma	Dark Surface y Mucky Mine y Gleyed Mat ted Matrix (F x Dark Surface ted Dark Sur x Depression F10) (LRR U ted Ochric (F Manganese M ic Surface (F Ochric (F17) ced Vertic (F- nont Floodpla	e (S9) (LRR S, 1 eral (F1) (LRR trix (F2) eral (F1) (LRR trix (F2) eral (F1) eral (F1) eral (F1) eral (F1) eral (F1) (MLRA 15) eral (F1) (MLRA 150) eral (F1	T, U) O) LRR O, P, T) U) OA, 150B) (MLRA 149A) (20) (MLRA 145	2 cm Muck (Ad Reduced Vertice Piedmont Flood Anomalous Brice (MLRA 153B) Red Parent Material Very Shallow Educators of wetland hydroniess disturbed (PA, 153C, 153D)	10) (LRR S) c (F18) (outside MLRA 150A, dplain Soils (F19) (LRR P, S, ight Loamy Soils (F20) aterial (TF2) Dark Surface (TF12) in Remarks) of hydrophytic vegetation and rology must be present, rbed or problematic.
Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRI 5 cm Mucky Mineral (A7) Muck Presence (A8) (LRI 1 cm Muck (A9) (LRR P, Depleted Below Dark Sur Thick Dark Surface (A12) Coast Prairie Redox (A16) Sandy Mucky Mineral (S1 Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR I	(LRR P, T, U R U) T) face (A11)) (MLRA 150) (LRR O, S) P, S, T, U)	Loamy Redox Marl (f Deplet Iron-M Loamy Loamy Marl (f Redox Anoma	y Mucky Mine y Gleyed Mat ted Matrix (F x Dark Surfac ted Dark Sur x Depression F10) (LRR U ted Ochric (F Manganese M ic Surface (F Ochric (F17) ced Vertic (F- nont Floodpla	eral (F1) (LRR trix (F2) F3) ce (F6) rface (F7) s (F8) J) F11) (MLRA 15 Masses (F12) (I F13) (LRR P, T,) (MLRA 151) H8) (MLRA 150 ain Soils (F19) (O) LRR O, P, T) U) DA, 150B) (MLRA 149A) (20) (MLRA 145	Reduced Verting Piedmont Floo Anomalous Bring (MLRA 153B) Red Parent Material Very Shallow Indicators of wetland hydroniess disturb (PA, 153C, 153D)	c (F18) (outside MLRA 150A, dplain Soils (F19) (LRR P, S, ight Loamy Soils (F20) aterial (TF2) Dark Surface (TF12) in Remarks) of hydrophytic vegetation and rology must be present, rbed or problematic.
Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRI 5 cm Mucky Minneral (A7) Muck Presence (A8) (LRI 1 cm Muck (A9) (LRR P, Depleted Below Dark Sur Thick Dark Surface (A12) Coast Prairie Redox (A16) Sandy Mucky Minneral (S1 Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR I) estrictive Layer (if observe Type: Depth (inches):	(LRR P, T, U R U) T) face (A11)) (MLRA 150) (LRR O, S) P, S, T, U)	Loamy Deplet Redox Marl (F Deplet Iron-M DA) Delta (Reduc Piedm Anoma	y Gleyed Mat ted Matrix (F x Dark Surfac ted Dark Sur x Depression F10) (LRR U ted Ochric (F Anganese M ic Surface (F Ochric (F17) ced Vertic (F- nont Floodpla	trix (F2) F3) ce (F6) rface (F7) ns (F8) J) F11) (MLRA 15 Masses (F12) (I F13) (LRR P, T,) (MLRA 151) 18) (MLRA 150 ain Soils (F19) ((1) LRR O, P, T) U) DA, 150B) (MLRA 149A) (20) (MLRA 149	Piedmont Floo Anomalous Bri (MLRA 153B) Red Parent Ma Very Shallow I Other (Explain 3Indicators of wetland hyd unless distu	dplain Soils (F19) (LRR P, S, aght Loamy Soils (F20) aterial (TF2) Dark Surface (TF12) in Remarks) of hydrophytic vegetation and rology must be present, rbed or problematic.
Stratified Layers (A5) Organic Bodies (A6) (LRI 5 cm Mucky Mineral (A7) Muck Presence (A8) (LRI 1 cm Muck (A9) (LRR P, Depleted Below Dark Sur Thick Dark Surface (A12) Coast Prairie Redox (A16) Sandy Mucky Mineral (S1 Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR I estrictive Layer (if observe Type: Depth (inches):	(LRR P, T, U R U) T) face (A11)) (MLRA 150) (LRR O, S) P, S, T, U)	Deplet Redox Peplet Redox Marl (F Deplet Iron-M DA) Delta G Reduc Piedm Anoma	ted Matrix (F x Dark Surface ted Dark Sur x Depression F10) (LRR U ted Ochric (F Manganese M ic Surface (F Ochric (F17) ced Vertic (F- nont Floodpla	ce (F6) rface (F7) rs (F8) J) F11) (MLRA 15 Masses (F12) (I F13) (LRR P, T,) (MLRA 151) (I8) (MLRA 150) An Soils (F19) (I	LRR O, P, T) U) DA, 150B) (MLRA 149A) (20) (MLRA 149	Anomalous Bri (MLRA 153B) Red Parent Ma Very Shallow I Other (Explain 3Indicators of wetland hyd unless distu	ight Loamy Soils (F20) aterial (TF2) Dark Surface (TF12) in Remarks) of hydrophytic vegetation and irology must be present, rbed or problematic.
Organic Bodies (A6) (LRI 5 cm Mucky Mineral (A7) Muck Presence (A8) (LRI 1 cm Muck (A9) (LRR P, Depleted Below Dark Sur Thick Dark Surface (A12) Coast Prairie Redox (A16) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR I estrictive Layer (if observe Type: Depth (inches):	(LRR P, T, U R U) T) face (A11)) (MLRA 150) (LRR O, S) P, S, T, U)	Redox Deplet Redox Marl (F Deplet Iron-M OA) Delta G Reduc Piedm Anoma	x Dark Surfacted Dark Surfacted Dark Surfacted Dark Surfacted Ochric (Fanganese Mic Surface (FOchric (F17) Cod Vertic (Font Floodpla	ce (F6) rface (F7) ns (F8) J) F11) (MLRA 15 Masses (F12) (I 13) (LRR P, T,) (MLRA 151) 18) (MLRA 150 ain Soils (F19) (LRR O, P, T) U) DA, 150B) (MLRA 149A) (20) (MLRA 149	(MLRA 153B) Red Parent Ma Very Shallow I Other (Explain 3Indicators of wetland hyd unless distu	aterial (TF2) Dark Surface (TF12) in Remarks) of hydrophytic vegetation and irology must be present, rbed or problematic.
5 cm Mucky Mineral (A7) Muck Presence (A8) (LRI 1 cm Muck (A9) (LRR P, Depleted Below Dark Sur Thick Dark Surface (A12) Coast Prairie Redox (A16 Sandy Mucky Mineral (S1 Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR I estrictive Layer (if observe Type: Depth (inches):	(LRR P, T, U R U) T) face (A11)) (MLRA 150) (LRR O, S) P, S, T, U)	Deplet Redox Marl (F Deplet Iron-M OA) Delta (C Reduc Piedm Anoma	ted Dark Sur x Depression F10) (LRR U ted Ochric (F Manganese M ic Surface (F Ochric (F17) ced Vertic (F nont Floodpla	rface (F7) Ins (F8) I) F11) (MLRA 15 Masses (F12) (I F13) (LRR P, T, F) (MLRA 151) Ins (MLRA 150) Ins (Ins (Ins (Ins) (Ins) (Ins) (Ins) (Ins) Ins (Ins) (Ins	LRR O, P, T) U) DA, 150B) (MLRA 149A) (20) (MLRA 149	Red Parent Ma Very Shallow E Other (Explain 3Indicators of wetland hyd unless distu 9A, 153C, 153D)	aterial (TF2) Dark Surface (TF12) in Remarks) of hydrophytic vegetation and irology must be present, rbed or problematic.
Muck Presence (A8) (LRI 1 cm Muck (A9) (LRR P, Depleted Below Dark Sur Thick Dark Surface (A12) Coast Prairie Redox (A16 Sandy Mucky Mineral (S1 Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR I estrictive Layer (if observe Type: Depth (inches):	R U) T) face (A11)) (MLRA 150) (LRR O, S) -, S, T, U) d):	Redox Marl (F Deplet Iron-M OA) Delta (Reduc Piedm Anoma	x Depression F10) (LRR U ted Ochric (F Manganese M ic Surface (F Ochric (F17) ced Vertic (F nont Floodpla	ns (F8) J) F11) (MLRA 15 Masses (F12) (I 13) (LRR P, T,) (MLRA 151) 18) (MLRA 156 ain Soils (F19) (LRR O, P, T) U) DA, 150B) (MLRA 149A) (20) (MLRA 149	Very Shallow [Other (Explain Indicators of wetland hyd unless distue) OA, 153C, 153D)	Dark Surface (TF12) in Remarks) of hydrophytic vegetation and rology must be present, rbed or problematic.
1 cm Muck (A9) (LRR P, Depleted Below Dark Sur Thick Dark Surface (A12) Coast Prairie Redox (A16 Sandy Mucky Mineral (S1 Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR I estrictive Layer (if observe Type: Depth (inches):	T) face (A11)) (MLRA 150) (LRR O, S) P, S, T, U)	Marl (f Deplet Iron-M Umbri Delta (Reduc	F10) (LRR U ted Ochric (F Manganese M ic Surface (F Ochric (F17) ced Vertic (F	J) F11) (MLRA 15 Masses (F12) (I f13) (LRR P, T,) (MLRA 151) 18) (MLRA 150 ain Soils (F19) (LRR O, P, T) U) DA, 150B) (MLRA 149A) (20) (MLRA 149	Other (Explain 3Indicators of wetland hyd unless distuentess of the wetland hyd unless distuentess of the wetland hyd unless distuentess of the wetland hydrogen hyd	in Remarks) of hydrophytic vegetation and rology must be present, rbed or problematic.
Depleted Below Dark Sur Thick Dark Surface (A12) Coast Prairie Redox (A16) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR I estrictive Layer (if observed Type: Depth (inches):	(A11) (MLRA 150) (MLRA 0, S) (MLRO, S)	Deplet Iron-M Umbri Delta (Reduce Piedm Anoma	ted Ochric (F Manganese M ic Surface (F Ochric (F17) ced Vertic (F nont Floodpla	F11) (MLRA 15 Masses (F12) (I 13) (LRR P, T,) (MLRA 151) 18) (MLRA 150 ain Soils (F19) (LRR O, P, T) U) DA, 150B) (MLRA 149A) (20) (MLRA 149	³ Indicators of wetland hyd unless distu	of hydrophytic vegetation and rology must be present, rbed or problematic.
Thick Dark Surface (A12) Coast Prairie Redox (A16) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR I estrictive Layer (if observe Type: Depth (inches):) (MLRA 150) (LRR O, S)) , S, T, U)	Iron-M DA) Umbrid Delta (Reduct Piedm Anoma	Manganese M ic Surface (F Ochric (F17) ced Vertic (F nont Floodpla	Masses (F12) (I 13) (LRR P, T,) (MLRA 151) 18) (MLRA 150 ain Soils (F19) (LRR O, P, T) U) DA, 150B) (MLRA 149A) (20) (MLRA 149	wetland hyd unless distu DA, 153C, 153D)	rology must be present, rbed or problematic.
Coast Prairie Redox (A16 Sandy Mucky Mineral (S1 Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR I estrictive Layer (if observe Type: Depth (inches): emarks:) (MLRA 150) (LRR O, S)) P, S, T, U)	DA) Umbrid Delta (Reduc Piedm Anoma	ic Surface (F Ochric (F17) ced Vertic (F nont Floodpla	13) (LRR P, T,) (MLRA 151) 18) (MLRA 150 ain Soils (F19) (U) DA, 150B) (MLRA 149A) (20) (MLRA 149	wetland hyd unless distu DA, 153C, 153D)	rology must be present, rbed or problematic.
Sandy Mucky Mineral (S1 Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR I estrictive Layer (if observe Type: Depth (inches): emarks:) (LRR O, S) P, S, T, U) d):	Delta (Reduc	Ochric (F17) ced Vertic (F ² nont Floodpla) (MLRA 151) 18) (MLRA 150 ain Soils (F19) (0A, 150B) (MLRA 149A) (20) (MLRA 149	unless distu DA, 153C, 153D)	rbed or problematic.
Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR I estrictive Layer (if observe Type: Depth (inches): emarks:	P, S, T, U)	Reduc Piedm Anoma	ced Vertic (F nont Floodpla	18) (MLRA 150 ain Soils (F19) ((MLRA 149A) 220) (MLRA 149	9A, 153C, 153D)	
X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR I estrictive Layer (if observe Type: Depth (inches): emarks:	P, S, T, U)	Piedm Anoma	nont Floodpla	ain Soils (F19) ((MLRA 149A) 220) (MLRA 149		Y No
Stripped Matrix (S6) Dark Surface (S7) (LRR I estrictive Layer (if observe Type: Depth (inches): emarks:	d):	Anoma	-		(MLRA 149		Y No
Dark Surface (S7) (LRR I estrictive Layer (if observe Type: Depth (inches): emarks:	d):		alous Bright	Loamy Soils (F			Y No
estrictive Layer (if observe Type: Depth (inches): emarks:	d):				Hydric	: Soil Present? Yes	Y No
							X No
positive indication of hydric s							
positive indication of hydric s							
	oil was obser	erved.					

Project/Site:		Bluewater SPM		County:	Nueces	Sampling	Date: Fe	ebruary 5, 2019
Applicant/Owner:		Lloyd Engi	ineering	Sta			Point:	•
Investigator(s):		and _		Section, Township			N/A	
Landform (hillslope, ter				Local relief (cond	ave, convex, no	one): None	Slope (%):	0-5
Subregion (LRR or MLI			ie	Lat:27.8	365111 Lo	ong:	3 Datum	: North American Datum 1983
Soil Map Unit Name:		ljar	n clay loam, rarely			NWI Classification:		N/A
Are climatic / hydrologic	conditions on	the site typical for	this time of year?	(Yes / No)	YES	_(if no, explain in Re	marks.)	
Are Vegetation	No,Soil	No ,or Hydrolo	gy No signi	ificantly disturbed?	Are "Normal C	Circumstances" prese	nt? Yes	X No
Are Vegetation	No,Soil	No ,or Hydrolo	gy <u>No</u> natu	rally problematic?	(If n	eeded, explain any a	nswers in Ren	narks.)
SUMMARY OF F	INDINGS -	Attach site m	nap showing s	sampling poir	nt locations	, transects, im	portant fe	atures, etc.
							<u> </u>	
Hydrophytic Vegetation	n Present?	Yes	No X					
Hydric Soil Present?	III TOSCIII:	Yes	No X		oled Area			
Wetland Hydrology Pr	esent?	Yes	No X	within a We		Yes	No	X
,								
Remarks:								
This point was det	ermined not to	be within a wetland	d due to the lack of	f all three wetland c	ritoria			
This point was de	emined not to	be within a welland	u due to the lack of	all tillee wetland c	niena.			
HYDROLOGY	l dia ataua.							
Wetland hydrolo	-					Secondary Indicato	•	f two required)
		one is required; che				Surface Soil	, ,	
Surface Wa	` ,	_	Aquatic Faun	, ,				ve Surface (B8)
High Water		_		s (B15) (LRR U)		Drainage Pat		
Saturation (•	_		lfide Odor (C1)		Moss Trim Li	, ,	
Water Mark	, ,	_	Oxidized Rhiz	zospheres on Livino	J Roots(C3)		Water Table (0	J2)
Sediment D	eposits (B2)	_	Presence of F	Reduced Iron (C4)		Crayfish Burr	ows (C8)	
Drift Deposi	ts (B3)	_	Recent Iron R	Reduction in Tilled S	3oils (C6)	Saturation Vi	sible on Aerial	Imagery (C9)
Algal Mat or	Crust (B4)	_	Thin Muck Su	urface (C7)		Geomorphic	Position (D2)	
Iron Deposi	is (B5)	_	Other (Explain	n in Remarks)		Shallow Aqui	tard (D3)	
Inundation \	/isible on Aeria	al Imagery (B7)				FAC-Neutral	Test (D5)	
Water-Stair	ed Leaves (B9))				Sphagnum m	noss (D8) (LRF	R T, U)
5 11101 //								
Field Observations:		N- V	Danah (inah	\. N/A				
Surface Water Preser			Depth (inch	· ——				
Water Table Present?			Depth (inch	·	Wetlend Hya	lualamii Duaaamt?	Vaa	No. V
Saturation Present? (includes capillary frin	Yes ge)	No X	Deptil (ilicii	nes): <u>>20</u>	vvettanu nyu	Irology Present?	Yes	NoX
Describe Recorde	d Data (stream	n gauge, monitoring	well, aerial photos	previous inspection	ns). if available:			
20001120 11000140	a 2 a.a (0 0 a	. gaage,eg	men, dendi prietes	, p	,			
Remarks:								
No positive indica	ion of wetland	hydrology was obs	erved.					

		Absolute	Dominant	Indicator	Dominance Test wo	rksheet:			
Tree Stratum (Plot size:	30 ft \	% cover		Status	Number of Dominant	Snacias			
1 Name Observed		70 00101	Орескоз:		That Are OBL, FACW	•		0	(Δ)
					That Are Obc, I AOV	, 01170			(八)
2					Total Number of Dem	inant			
3					Total Number of Dom			^	(D)
4					Species Across All St		<u> </u>	0	(B)
5					D	S			
6			- T-t-L Cavan		Percent of Dominant S	•		^	(A/D)
	500/ 5/ / /		= Total Cover		That Are OBL, FACW	, or FAC: _		<u> </u>	(A/B)
	50% of total cover:	0	20% of total cover:		Prevalence Index We	arkehoot:			
Sapling Stratum (Plot size:	30 ft.)								
					Total % Cov	-		Multiply by:	
2					OBL species		x 1 =	0	
3					FACW species			0	
4					FAC species		x 3 =	0	
5					FACU species		x 4 =	0	
6					UPL species	0	x 5 =	0	
			= Total Cover		Column Totals:	0	(A)	0	(B)
		0	20% of total cover:	0					
Shrub Stratum (Plot size:	30 ft.)				Prevalence I	ndex = B/A =		N/A	
•									
2					Hydrophytic Vegetat	ion Indicator	rs:		
3					1 - Rapid Tes	st for Hydroph	ytic Vege	etation	
4					2 - Dominand				
5					3 - Prevalenc				
6			<u> </u>		Problematic I	Hydrophytic V	egetation	n ¹ (Explain)	
		0	= Total Cover						
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric	soil and wetla	nd hydro	logy must	
Herb Stratum (Plot size:	30 ft.)				be present, unless dis	turbed or prol	olematic.		
1. None Observed					Definitions of Five V	egetation St	rata:		
2					Tree - Woody plants,	excluding wo	ody vine	s,	
3					approximately 20 ft (6	m) or more in	height a	nd 3 in.	
4					(7.6 cm) or larger in d	iameter at bre	ast heigh	ht (DBH).	
5									
6					Sapling - Woody plar	nts, excluding	woody v	ines,	
7					approximately 20 ft (6	m) or more in	n height a	and less	
8.					than 3 in. (7.6 cm) DB	H.			
9.									
10.					Shrub - Woody plants	_	-	es,	
11.					approximately 3 to 20	ft (1 to 6 m) i	n height.		
		0	= Total Cover						
	50% of total cover:	0	20% of total cover:	0	Herb - All herbaceous	(non-woody)	plants, ii	ncluding	
Woody Vine Stratum (Plot size:	30 ft.)		=		herbaceous vines, reg	ardless of siz	e, <u>and</u> w	oody	
1. None Observed					plants, except woody	vines, less tha	an appro	ximately	
2.			<u> </u>		3 ft (1 m) in height.				
3.			<u> </u>						
4.					Woody vine - All woo	dy vines, rega	ardless o	of height.	
5.				-					
		0	= Total Cover		Hydrophytic				
	50% of total cover:		20% of total cover:	0	Vegetation				
					_	s	No 2	x	
					110001111	·			
Remarks: (if observed, list mo	rnhological adaptati	ione helow	1						
•			,						
No positive indication of hydro	phytic vegetation wa	as observe	ed (≥50% of dominan	it species ind	exed as FAC- or drier).				
No vegetation present.									

Depth	Matrix			Redox F		omini tile abs	ence of indicators.)		
inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-20	10YR 5/1	100	None				Sandy Loam	romano	
		100			-				
	-								
							-		
					-				
						2	. 		
	ncentration, D=Dep					Location: P	L=Pore Lining, M=Mat	_	
-	Indicators: (Appl	icable to all	•		•	DD 0 T II)		blematic Hydric Soils ³ :	
Histosol (A1)				Polyvalue Below Surface (S8) (LRR S, T, U Thin Dark Surface (S9) (LRR S, T, U)			1 cm Muck (A9) (LRR 0)		
Histic Epipedon (A2)						•	2 cm Muck (A10) (LRR S)		
Black Histic (A3)				Loamy Mucky Mineral (F1) (LRR O)				Reduced Vertic (F18) (outside MLRA 150A	
Hydrogen Sulfide (A4)				Loamy Gleyed Matrix (F2)				Piedmont Floodplain Soils (F19) (LRR P, S,	
Stratified Layers (A5)			Deplete	Depleted Matrix (F3)				Anomalous Bright Loamy Soils (F20)	
Organic Bodies (A6) (LRR P, T, U)			Redox	Redox Dark Surface (F6)				(MLRA 153B)	
5 cm Mucky Mineral (A7) (LRR P, T, U)			Deplete	Depleted Dark Surface (F7)			Red Parent Material (TF2)		
Muck Presence (A8) (LRR U)			Redox	Redox Depressions (F8)			Very Shallow Dark Surface (TF12)		
1 cm Muck (A9) (LRR P, T)			Marl (F	Marl (F10) (LRR U)			Other (Explain in Remarks)		
Depleted	d Below Dark Surfa	ice (A11)	Deplete	ed Ochric (F11) (MLRA 1	51)			
Thick Dark Surface (A12)		Iron-Ma	Iron-Manganese Masses (F12) (LRR O,			wetland hydrology must be present,			
Coast Prairie Redox (A16) (MLRA 150A)		Umbrio	Umbric Surface (F13) (LRR P, T, U)						
	lucky Mineral (S1)			Ochric (F17) (MLRA 151)		unless distu	rbed or problematic.	
Sandy G	Gleyed Matrix (S4)				18) (MLRA 15	0A, 150B)			
	Redox (S5)					(MLRA 149A)			
	Matrix (S6)			•	` ,		9A, 153C, 153D)		
					(,,,		
	` ,	S. T. U)							
	rface (S7) (LRR P,	S, T, U)							
Dark Su	` ,								
Dark Su	rface (S7) (LRR P,	:							
Dark Sur estrictive L	rface (S7) (LRR P,	:				Hydri	c Soil Present? Yes	No X	
Dark Su	rface (S7) (LRR P,	:				Hydri	c Soil Present? Yes	No X	
Dark Sur Eestrictive L Type: Depth (inc	rface (S7) (LRR P,	:				Hydrid	c Soil Present? Yes	No X	
Dark Sur Eestrictive L Type: Depth (inc	rface (S7) (LRR P,	:				Hydrid	c Soil Present? Yes	No X	
Dark Sure Lestrictive L Type: Depth (incoderates:	rface (S7) (LRR P, ayer (if observed) hes):	:				Hydrid	c Soil Present? Yes	No X	
Dark Sure Lestrictive L Type: Depth (incoderates:	rface (S7) (LRR P,	:				Hydrid	c Soil Present? Yes	No X	
Dark Sure Lestrictive L Type: Depth (incoderates:	rface (S7) (LRR P, ayer (if observed) hes):	:				Hydrie	c Soil Present? Yes	No X	
Dark Sure Lestrictive L Type: Depth (incoderates:	rface (S7) (LRR P, ayer (if observed) hes):	:				Hydrid	c Soil Present? Yes	No X	
Dark Sure Lestrictive L Type: Depth (incoderates:	rface (S7) (LRR P, ayer (if observed) hes):	:				Hydrid	c Soil Present? Yes	No X	
Dark Sure Lestrictive L Type: Depth (incoderates:	rface (S7) (LRR P, ayer (if observed) hes):	:				Hydrid	c Soil Present? Yes	No X	
Dark Sure Lestrictive L Type: Depth (incoderates:	rface (S7) (LRR P, ayer (if observed) hes):	:				Hydrid	c Soil Present? Yes	No X	
Dark Sure Lestrictive Lestrict	rface (S7) (LRR P, ayer (if observed) hes):	:				Hydrid	c Soil Present? Yes	No X	
Dark Sure Lestrictive Lestrict	rface (S7) (LRR P, ayer (if observed) hes):	:				Hydrid	c Soil Present? Yes	No X	
Dark Sure Lestrictive Lestrict	rface (S7) (LRR P, ayer (if observed) hes):	:				Hydrid	c Soil Present? Yes	No X	
Dark Sure Lestrictive L Type: Depth (incoderates:	rface (S7) (LRR P, ayer (if observed) hes):	:				Hydri	c Soil Present? Yes	No X	
Dark Sure Lestrictive L Type: Depth (incoderates:	rface (S7) (LRR P, ayer (if observed) hes):	:				Hydri	c Soil Present? Yes	No X	
Dark Sure Lestrictive L Type: Depth (incoderates:	rface (S7) (LRR P, ayer (if observed) hes):	:				Hydri	c Soil Present? Yes	No X	
Dark Sure Lestrictive L Type: Depth (incoderates:	rface (S7) (LRR P, ayer (if observed) hes):	:				Hydri	c Soil Present? Yes	No X	
Dark Sure Depth (incompression)	rface (S7) (LRR P, ayer (if observed) hes):	:				Hydri	c Soil Present? Yes	No X	
Dark Sure Lestrictive L Type: Depth (incoderates:	rface (S7) (LRR P, ayer (if observed) hes):	:				Hydri	c Soil Present? Yes	NoX	
Dark Sure Depth (incompression)	rface (S7) (LRR P, ayer (if observed) hes):	:				Hydri	c Soil Present? Yes	NoX	
Dark Sure Lestrictive L Type: Depth (incoderates:	rface (S7) (LRR P, ayer (if observed) hes):	:				Hydri	c Soil Present? Yes	No X	
Dark Sur Restrictive L Type: Depth (inc	rface (S7) (LRR P, ayer (if observed) hes):	:				Hydri	c Soil Present? Yes	No X	
Dark Sure Lestrictive L Type: Depth (incoderates:	rface (S7) (LRR P, ayer (if observed) hes):	:				Hydri	c Soil Present? Yes	No X	
Dark Sure Lestrictive L Type: Depth (incoderates:	rface (S7) (LRR P, ayer (if observed) hes):	:				Hydri	c Soil Present? Yes	No X	
Dark Surestrictive L Type: Depth (incomercial)	rface (S7) (LRR P, ayer (if observed) hes):	:				Hydri	c Soil Present? Yes	No X	
Dark Surestrictive L Type: Depth (incomercial)	rface (S7) (LRR P, ayer (if observed) hes):	:				Hydri	c Soil Present? Yes	No X	

Project/Site:	Bluewater SPM	(County:	Nueces		Sampling Da	ite: Fe	ebruary 5, 2019
<u> </u>	Lloyd Engineer		Stat		Texas			
• • • • • • • • • • • • • • • • • • • •			Section, Township				N/A	
Landform (hillslope, terrace, etc.			Local relief (conca	_	none):	None	Slope (%):	0-5
Subregion (LRR or MLRA):							Datum:	North American Datum 1983
Soil Map Unit Name:		y loam, rarely flo				assification:		E2USP
Are climatic / hydrologic condition	ons on the site typical for this t	ime of year?			(if no, ex	 plain in Rema	rks.)	
Are Vegetation No ,S	Soil No ,or Hydrology	No signific	antly disturbed?	Are "Normal	Circumstar	nces" present?	Yes	X No
Are Vegetation No ,S	Soil No , or Hydrology	No natural	lly problematic?	(If	needed, ex	plain any ansv	wers in Ren	narks.)
SUMMARY OF FINDING	GS - Attach site man	showing sa	amplina poin	t location	e trane	ects imno	rtant fea	atures etc
COMMITTEE OF THE DITT		Jilowing 30			5, trails	coto, impo	Tturre ro	
Hydrophytic Vegetation Preser		No						
Hydric Soil Present?		No	Is the Samp	led Area				
Wetland Hydrology Present?	Yes	NoX	within a Wet	tland?	Yes	S	No	X
Remarks:								
This point was determined HYDROLOGY	not to be within a wetland du	e to the lack of w	etland hydrology.					
Wetland hydrology Indica	ators:				Seconda	ary Indicators (minimum o	f two required)
Primary Indicators (minimu	m of one is required; check a	I that apply)				urface Soil Cra		two roquirou
Surface Water (A1)	1 ,	Aquatic Fauna	(B13)					ve Surface (B8)
High Water Table (A	2)	Marl Deposits (I				rainage Patteri		` '
Saturation (A3)	· —	Hydrogen Sulfic	de Odor (C1)			oss Trim Lines		
Water Marks (B1)			spheres on Living	Roots(C3)		ry-Season Wa		(2)
Sediment Deposits (B2)		duced Iron (C4)	, ,		rayfish Burrow		,
Drift Deposits (B3)		Recent Iron Rec	duction in Tilled So	oils (C6)	· ·	aturation Visibl	le on Aerial	Imagery (C9)
Algal Mat or Crust (E	34)	Thin Muck Surfa	ace (C7)		G	eomorphic Pos	sition (D2)	
Iron Deposits (B5)	· —	Other (Explain i	in Remarks)		— SI	nallow Aquitaro	d (D3)	
Inundation Visible or	Aerial Imagery (B7)				X F/	AC-Neutral Te	st (D5)	
Water-Stained Leave	es (B9)				S _I	ohagnum moss	s (D8) (LRF	≀ T, U)
Field Observations:								
Surface Water Present? Y	es NoX	Depth (inches	s): <u>N/A</u>					
	es NoX	Depth (inches	<i>'</i>					
Saturation Present? Y	es NoX	Depth (inches	s): <u>>20</u>	Wetland Hy	drology P	resent? Ye	es	_ NoX
(includes capillary fringe) Describe Recorded Data (s	stream gauge, monitoring well	, aerial photos, p	previous inspection	ls), if available	e:			
Remarks:								
No positive indication of we	etland hydrology was observe	d.						

	Absolute	e Dominant	Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size: 30 ft.			Status	Number of Dominant Species		
1 Nama Observad				That Are OBL, FACW, or FAC:	2	(A)
				That rice OBE, Trove, of Tro.		(71)
2				Total Number of Dominant		
3					2	(D)
4				Species Across All Strata:		(B)
5						
6				Percent of Dominant Species		
		_= Total Cover		That Are OBL, FACW, or FAC:	100%	(A/B)
50% of	f total cover: 0	_ 20% of total cover:	0			
Sapling Stratum (Plot size: 30 ft.)			Prevalence Index Worksheet:		
1. None Observed				Total % Cover of:	Multiply by:	
2				OBL species10	x 1 =10	
3				FACW species0	x 2 =0	
4				FAC species0	x 3 =0	
5				FACU species0	x 4 =0	
6				UPL species0	x 5 = 0	
		= Total Cover		Column Totals: 10	(A) 10	(B)
50% of	f total cover: 0	_ 20% of total cover:	0		<u> </u>	
Shrub Stratum (Plot size: 30 ft.				Prevalence Index = B/A =	= 1.00	
1. None Observed						
2.				Hydrophytic Vegetation Indicate	ore:	
				1 - Rapid Test for Hydron		
3			-	X 2 - Dominance Test is >5		
4				X 3 - Prevalence Index is ≤		
5						
6				Problematic Hydrophytic	vegetation (Explain))
		_= Total Cover				
	· · · · · · · · · · · · · · · · · · ·	_ 20% of total cover:	0	¹ Indicators of hydric soil and wet		
Herb Stratum (Plot size: 30 ft.)			be present, unless disturbed or pr	oblematic.	
Salicornia depressa		Yes	OBL_	Definitions of Five Vegetation S		
2. Batis maritima	5	Yes	OBL_	Tree - Woody plants, excluding w	oody vines,	
3				approximately 20 ft (6m) or more i	n height and 3 in.	
4				(7.6 cm) or larger in diameter at b	reast height (DBH).	
5						
6				Sapling - Woody plants, excludin	g woody vines,	
7				approximately 20 ft (6 m) or more	in height and less	
8.				than 3 in. (7.6 cm) DBH.		
9.			<u> </u>			
10.				Shrub - Woody plants, excluding	woody vines,	
11.				approximately 3 to 20 ft (1 to 6 m)	in height.	
		= Total Cover	-			
50% of		20% of total cover:	2	Herb - All herbaceous (non-wood	y) plants, including	
Woody Vine Stratum (Plot size: 3		_ 20 % of total cover.		herbaceous vines, regardless of s	,,,	
1. None Observed	<u>o it.</u>)			plants, except woody vines, less t		
				3 ft (1 m) in height.	" ,	
2.				o ii (i iii) iii iioigiiii		
3				Woody vine - All woody vines, re	gardless of beight	
4				violety vine - All woody vines, re	gardiess of fleight.	
5						
	-	_= Total Cover		Hydrophytic		
50% of	f total cover: 0	_ 20% of total cover:	0	Vegetation		
				Present? Yes X	No	
Remarks: (if observed, list morpholog	gical adaptations below	v).				
A positive indication of hydrophytic ve	getation was observed	d (>50% of dominant	snecies indexe	ed as OBL_FACW_or FAC)		
7. positivo indication of flydrophytic ve	90.0001 1100 00361160	a to 00 % or dominant	opeoies indext	od do ODE, i MOTT, of i MOJ.		
A manifeliation in discretions of bandon who discrete						
	getation was charge	d (Prevalence Indox :	e < 3 NN\			
A positive indication of hydrophytic ve	getation was observed	d (Prevalence Index i	s ≤ 3.00).			
A positive indication of hydrophytic ve	getation was observed	d (Prevalence Index i	s ≤ 3.00).			

Depth	Matrix			Redox F	eatures					
inches)	Color (moist)		Color (moist)	%_	Type'	Loc ²	Texture	Remarks		
0-3	2.5Y_5/1_	100	None				Sandy Loam			
3-20	N 4	_98_	10YR_5/4_	_2_	C	<u>PL</u>	Sandy Loam			
				_						
		_		_						
Type: C=0	 Concentration, D=De	 pletion, RM	=Reduced Matrix, N	—— IS=Masked	 d Sand Grains.	² Location: P	L=Pore Lining, M=Matri	К.		
Hydric Soil	ls Indicators: (App	licable to a	III LRRs, unless ot	herwise n	oted.)		Indicators for Probl	ematic Hydric Soils ³ :		
Histos	ol (A1)		Polyval	ue Below S	Surface (S8) (L	RR S, T, U)	1 cm Muck (A9)	(LRR O)		
Histic	Epipedon (A2)		Thin Da	ark Surface	e (S9) (LRR S,	T, U)	2 cm Muck (A10) (LRR S)		
Black	Histic (A3)		Loamy	Mucky Mir	neral (F1) (LRR	(O)	Reduced Vertic	(F18) (outside MLRA 150A,		
Hydro	gen Sulfide (A4)		Loamy	Gleyed Ma	atrix (F2)		Piedmont Flood	olain Soils (F19) (LRR P, S, '		
Stratifi	ed Layers (A5)		Deplete	ed Matrix (I	F3)		Anomalous Brig	nt Loamy Soils (F20)		
Organ	ic Bodies (A6) (LRR	RR P, T, U) Redox Dark Surface (F6) (ML								
5 cm N	Mucky Mineral (A7) (I	LRR P, T, L	J) Deplete	ed Dark Su	ırface (F7)		Red Parent Material (TF2)			
Muck I	Presence (A8) (LRR	U)	Redox	Depression	ns (F8)		Very Shallow Da	ark Surface (TF12)		
1 cm N	Muck (A9) (LRR P, T)	Marl (F	10) (LRR I	J)		Other (Explain in	n Remarks)		
Deplet	ed Below Dark Surfa	ace (A11)	Deplete	ed Ochric (F11) (MLRA 1 5	51)	_			
Thick	Dark Surface (A12)		Iron-Ma	anganese I	Masses (F12) (LRR O, P, T)				
Coast	Prairie Redox (A16)	(MLRA 150	Umbric Surface (F13) (LRR P, T, U)				wetland hydrology must be present, unless disturbed or problematic.			
Sandy	Mucky Mineral (S1)	(LRR O, S	Delta C	chric (F17) (MLRA 151)		uniess distant	ed of problematic.		
X Sandy	Gleyed Matrix (S4)		Reduce	ed Vertic (F	18) (MLRA 15	0A, 150B)				
X Sandy	Redox (S5)		Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A)				
Strippe	ed Matrix (S6)		Anoma	lous Bright	Loamy Soils (F	20) (MLRA 14	9A, 153C, 153D)			
Dark S	Surface (S7) (LRR P	S, T, U)								
	Layer (if observed):								
Type:	. — .					l				
Depth (II	nches):					Hydrid	c Soil Present? Yes _	X No		
Remarks:										
A positive in	ndication of hydric so	il was obse	rved.							

Project/Site:	Bluewater SPM	C	County:	Nueces	:	Sampling Date	e: February 5, 2019		
•	Lloyd Enginee		State				:: DPB035 PEM		
	· · · · · ·		Section, Township	o, Range:		•	N/A		
Landform (hillslope, terrace, etc.)		iter l	Local relief (conca	ave, convex, n	ione): I	None S	lope (%): 0-5		
Subregion (LRR or MLRA):					· ·		Datum: North American Datum 1		
Soil Map Unit Name:		y loam, rarely floo				sification:			
Are climatic / hydrologic condition	s on the site typical for this	time of year?			_				
Are Vegetation No ,Sc	oil No ,or Hydrology	No signific	antly disturbed?	Are "Normal	 Circumstanc	es" present?	Yes X No		
Are Vegetation No ,Sc	oil No ,or Hydrology	No natural	ly problematic?	(If	needed, exp	lain any answ	ers in Remarks.)		
SUMMARY OF FINDING	S - Attach site man	showing sa	mpling poin	t location	e tranco	rte imnor	tant features etc		
	- Attaon Site map	Jilowing 3u				oto, impor	turit routures, etc.		
Hydrophytic Vegetation Present		No							
Hydric Soil Present?	YesX	No	Is the Sampl	led Area					
Wetland Hydrology Present?	Yes X	No	within a Wet	lland?	Yes	X	No		
Remarks: This point was determined to	b be within a wetland due to	the presence of a	all 3 wetland criter	ia.					
HYDROLOGY									
Wetland hydrology Indicat	ors:				Secondary	/ Indicators (m	ninimum of two required)		
Primary Indicators (minimum	of one is required; check a	ll that apply)			Sur	face Soil Crac	ks (B6)		
Surface Water (A1)	X	Aquatic Fauna (B13)		Spa	rsely Vegetate	ed Concave Surface (B8)		
X High Water Table (A2		Marl Deposits (E	B15) (LRR U)		Drainage Patterns (B10)				
Saturation (A3)		Hydrogen Sulfid	le Odor (C1)		Mos	s Trim Lines	(B16)		
Water Marks (B1)		Oxidized Rhizos	spheres on Living	Roots(C3)	Dry-	Season Wate	er Table (C2)		
Sediment Deposits (B	2)	Presence of Red	duced Iron (C4)		Cra	yfish Burrows	(C8)		
Drift Deposits (B3)		Recent Iron Rec	duction in Tilled So	oils (C6)	Sati	uration Visible	on Aerial Imagery (C9)		
Algal Mat or Crust (B4	·)	Thin Muck Surfa	ace (C7)		Geo	morphic Posi	tion (D2)		
Iron Deposits (B5)		Other (Explain in	n Remarks)		Sha	llow Aquitard	(D3)		
Inundation Visible on A						C-Neutral Test	, ,		
Water-Stained Leaves	s (B9)				Sph	agnum moss	(D8) (LRR T, U)		
Field Observed and									
Field Observations:	. N. V	Don'th Cook or	\ N/A						
	s NoX	Depth (inches	<i>'</i>						
	s <u>X</u> No	Depth (inches Depth (inches		Watland H	drology Bro	cont2 Voc	o V No		
(includes capillary fringe)	s NoX	Deptil (iliches	. <u>~20</u>	vvetianu ny	ulology Fie	Sentr res	sX No		
Describe Recorded Data (str	ream gauge, monitoring wel	l, aerial photos, p	revious inspection	ıs), if available	e:				
Remarks:									
Remarks.									
A positive indication of wetla	nd hydrology was observed	(at least one prin	nary indicator).						
Aquatic Fauna: crabs.									

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft.)	% cover	Species?	Status	Number of Dominant Species	
1 Nama Ohaamiad					That Are OBL, FACW, or FAC:	(A)
2.						` '
3.					Total Number of Dominant	
4.					Species Across All Strata: 1	(B)
5.					·	` '
6.					Percent of Dominant Species	
			= Total Cover		That Are OBL, FACW, or FAC: 100%	(A/B)
	50% of total cover:	0	20% of total cover:	0		,
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1. None Observed					Total % Cover of: Multiply by	:
2.					OBL species 100 x 1 = 100	
3.					FACW species 0 x 2 = 0	
4.					FAC species 0 x 3 = 0	
5.					FACU species 0 x 4 = 0	
6.					UPL species 0 x 5 = 0	
	<u>.</u>	0	= Total Cover		Column Totals: 100 (A) 100	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:					Prevalence Index = B/A = 1.00	
1. None Observed					Usdronhytia Vanatation Indicators	
2.					Hydrophytic Vegetation Indicators:	
3					1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50%	
4					X 3 - Prevalence Index is $\leq 3.0^{1}$	
5					Problematic Hydrophytic Vegetation ¹ (Explain	`
6			= Total Cover		1 Toblematio Trydrophytio Vegetation (Explain	,
	50% of total cover:		20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:			20% of total cover.		be present, unless disturbed or problematic.	
4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	<u> </u>	100	Yes	OBL	Definitions of Five Vegetation Strata:	
2.					Tree - Woody plants, excluding woody vines,	
3.					approximately 20 ft (6m) or more in height and 3 in.	
4.					(7.6 cm) or larger in diameter at breast height (DBH).	
5.					(,,	
6.					Sapling - Woody plants, excluding woody vines,	
7.					approximately 20 ft (6 m) or more in height and less	
8.					than 3 in. (7.6 cm) DBH.	
9.						
10.					Shrub - Woody plants, excluding woody vines,	
11.					approximately 3 to 20 ft (1 to 6 m) in height.	
		100	= Total Cover			
	50% of total cover:		20% of total cover:	20	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:					herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2.	<u> </u>				3 ft (1 m) in height.	
3.	<u> </u>					
4.	•				Woody vine - All woody vines, regardless of height.	
5.						
		0	= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes X No	
Domorke: /# =h = ······ 1 P ·	ambalarias I - 1/- C	one balan				
Remarks: (if observed, list m	orpnological adaptati	ons below).			
A positive indication of hydrop	phytic vegetation was	observed	(>50% of dominant	species index	ed as OBL, FACW, or FAC).	
A positive inclination of booten	hydio voget-ti	oboc	(Dravalanta Index)	~ 2 00\		
A positive indication of hydrop	onylic vegetation was	Devressuo	(Frevalence Index I	s ≥ 3.UU).		

Depth	Matrix			Redox F	eatures					
inches)	Color (moist)	<u>%</u>	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks		
0-3	2.5Y 5/1	100	None				Sandy Loam			
3-20	N 4	_98_	10YR 5/4	_2_	C	PL	Sandy Loam_			
	Concentration, D=Dep		· · · · · · · · · · · · · · · · · · ·			² Location: F	PL=Pore Lining, M=Matrix			
Hydric Soil	s Indicators: (Appl	icable to a	all LRRs, unless o	therwise n	oted.)		Indicators for Proble	matic Hydric Soils ³ :		
Histos	ol (A1)				Surface (S8) (L		1 cm Muck (A9) (LRR O)		
Histic Epipedon (A2) Rlack Histic (Δ3) Hoamy Mucky Mineral (F1)					e (S9) (LRR S,	T, U)	2 cm Muck (A10)	(LRR S)		
Black Histic (A3)Loamy Mucky Mineral (F1) (LI						: O)	Reduced Vertic (F18) (outside MLRA 150A,		
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)							Piedmont Floodp	lain Soils (F19) (LRR P, S,		
Stratifi	ed Layers (A5)		Deple	ted Matrix (F	=3)		Anomalous Brigh	t Loamy Soils (F20)		
Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6)							(MLRA 153B)			
5 cm N	/lucky Mineral (A7) (L	.RR P, T, l	J) Deple	ted Dark Su		Red Parent Material (TF2)				
Muck F	Presence (A8) (LRR	U)	Redox	(Depression	ns (F8)		Very Shallow Da	k Surface (TF12)		
1 cm N	cm Muck (A9) (LRR P, T) Marl (F10) (LRR U)						Other (Explain in	Remarks)		
Deplet	ed Below Dark Surfa	ce (A11)	Deple	ted Ochric (F11) (MLRA 1	51)				
Thick I	Dark Surface (A12)		Iron-M	langanese N	Masses (F12)	(LRR O, P, T)		ydrophytic vegetation and		
Coast	Prairie Redox (A16) ((MLRA 15	0A) Umbri	c Surface (F	13) (LRR P, T	, U)	-	ogy must be present,		
Sandy	Mucky Mineral (S1)	(LRR O, S) Delta	Ochric (F17) (MLRA 151)		นเทอรร นเรเนเม	ed or problematic.		
X Sandy	Gleyed Matrix (S4)		Reduc	ced Vertic (F	18) (MLRA 15	0A, 150B)				
X Sandy	Redox (S5)		Piedm	ont Floodpl	ain Soils (F19)	(MLRA 149A)				
Strippe	ed Matrix (S6)		Anom	alous Bright	Loamy Soils (I	=20) (MLRA 1 4	19A, 153C, 153D)			
Dark S	Surface (S7) (LRR P,	S, T, U)								
Restrictive	Layer (if observed)	:								
Type:										
Depth (ii	nches):					Hydri	ic Soil Present? Yes _	X No		
Remarks:										
A positive ir	ndication of hydric soi	ıl was obse	erved.							

Project/Site:	Bluewater SPM	Co	ounty:	Nueces	;	Sampling Date:	February 5, 2019
Applicant/Owner:	Lloyd Engineer		State			Sample Point:	•
· · · — — — — — — — — — — — — — — — — —	Bailey and N		ection, Township	, Range:		 N/A	
Landform (hillslope, terrace, etc.			ocal relief (conca	· · · —	none): I	None Slope	(%): 0-5
0 ((((((((((((((((((None		Lat: 27.86				itum: North American Datum 1983
Soil Map Unit Name:		y loam, rarely flood	_		· —	sification:	E2USP
Are climatic / hydrologic conditio	ns on the site typical for this ti	ime of year? (Yes / No)	YES	(if no, exp	lain in Remarks.)	
Are Vegetation No ,S	Soil No ,or Hydrology	No significar	ntly disturbed?	Are "Normal	Circumstanc	es" present? Yes	X No
Are Vegetation No ,S	Soil No ,or Hydrology	No naturally	problematic?	(If	needed, exp	lain any answers in	Remarks.)
SUMMARY OF FINDING		ehowing ear	nnling noin	t location	e tranco	cte important	fastures etc
	OO - Attach Site map	Silowing sail	ilpiilig poili	Liocation	3, transet	cts, important	reatures, etc.
Hydrophytic Vegetation Presen	t? Yes X	No					
Hydric Soil Present?		No	Is the Sampl	led Area			
Wetland Hydrology Present?	Yes X	No	within a Wet	tland?	Yes	X No)
Remarks:	to be within a wetland due to	the presence of all	I 3 wetland criter	rio			
This point was determined	to be within a wetland due to	ine presence of all	i 3 welland chier	ia.			
HYDROLOGY							
Wetland hydrology Indica	ators:				Secondary	/ Indicators (minimu	ım of two required)
Primary Indicators (minimu	m of one is required; check all	I that apply)			Surf	face Soil Cracks (B	6)
X Surface Water (A1)	<u>X</u>	Aquatic Fauna (B	13)		Spa	rsely Vegetated Co	ncave Surface (B8)
High Water Table (A	2)	Marl Deposits (B1	15) (LRR U)		Dra	inage Patterns (B10	0)
Saturation (A3)		Hydrogen Sulfide	Odor (C1)		Mos	ss Trim Lines (B16)	
Water Marks (B1)		Oxidized Rhizosp	heres on Living	Roots(C3)	Dry-	-Season Water Tab	ole (C2)
Sediment Deposits (I	B2)	Presence of Redu	uced Iron (C4)		Cra	yfish Burrows (C8)	
Drift Deposits (B3)		Recent Iron Redu	ction in Tilled So	oils (C6)	Sati	uration Visible on A	erial Imagery (C9)
Algal Mat or Crust (B		Thin Muck Surfac	ce (C7)		Geo	morphic Position (I	D2)
Iron Deposits (B5)		Other (Explain in	Remarks)		Sha	llow Aquitard (D3)	
Inundation Visible on	Aerial Imagery (B7)				_ X _ FAC	C-Neutral Test (D5)	
Water-Stained Leave	es (B9)				Sph	agnum moss (D8)	(LRR T, U)
				1			
Field Observations:							
	es <u>X</u> No	Depth (inches):					
	es NoX	Depth (inches):					
	es NoX	Depth (inches):	>20	Wetland Hy	drology Pre	sent? Yes	X No
(includes capillary fringe)							
Describe Recorded Data (s	tream gauge, monitoring well,	, aerial photos, pre	evious inspection	ns), if available	e:		
Remarks:							
Remarks:							
A positive indication of wetl	and hydrology was observed	(at least one prima	ary indicator)				
, , positivo in albation of troti	and nyarenegy mae ezecited	(at loadt one pillin	ary mandatory.				
Aquatic Fauna: fish, crabs.							
, 144410 , 441141 11011, 614201							

		Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:	30 ft \	% cover	Species?	Status	Number of Dominant Species
4 14 04 4		70 00 001	Орескоз:	Otatus	
					That Are OBL, FACW, or FAC: (A)
2			-		Tatal Number of Descinant
3					Total Number of Dominant
4					Species Across All Strata:1 (B)
5					
6					Percent of Dominant Species
		0	= Total Cover		That Are OBL, FACW, or FAC: (A/B)
	50% of total cover:	0	20% of total cover:	0	
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:
1. None Observed					Total % Cover of: Multiply by:
2					OBL species 65 x 1 = 65
3					FACW species 0 x 2 = 0
4.					FAC species 0 x 3 = 0
5.					FACU species 0 x 4 = 0
6.					UPL species 0 x 5 = 0
			= Total Cover		Column Totals: 65 (A) 65 (B)
	50% of total cover:		20% of total cover:	0	(5)
Shrub Stratum (Plot size:			_570 57 total 00V61.		Prevalence Index = B/A = 1.00
1. None Observed	<u> </u>				1 TOVARONOC INDEX - DIA - 1.00
					Hudusukutis Vanstatisu Indicataus
2.					Hydrophytic Vegetation Indicators:
3					1 - Rapid Test for Hydrophytic Vegetation
4					X 2 - Dominance Test is >50%
5					X 3 - Prevalence Index is ≤ 3.0 ¹
6					Problematic Hydrophytic Vegetation ¹ (Explain)
			= Total Cover		
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.
1. Avicennia germinans		60	Yes	OBL	Definitions of Five Vegetation Strata:
2. Salicornia depressa		5	No	OBL	Tree - Woody plants, excluding woody vines,
3					approximately 20 ft (6m) or more in height and 3 in.
4					(7.6 cm) or larger in diameter at breast height (DBH).
5					
6.					Sapling - Woody plants, excluding woody vines,
7.					approximately 20 ft (6 m) or more in height and less
8.					than 3 in. (7.6 cm) DBH.
9.					
10.					Shrub - Woody plants, excluding woody vines,
4.4					approximately 3 to 20 ft (1 to 6 m) in height.
11			= Total Cover		
	EOO/ of total cover		20% of total cover:	12	Herb - All herbaceous (non-woody) plants, including
		32.5	20% of total cover.	13	herbaceous vines, regardless of size, <u>and</u> woody
Woody Vine Stratum (Plot size: _					plants, except woody vines, less than approximately
1. None Observed					3 ft (1 m) in height.
2					o it (1 iii) iii noigiit.
3					Weeds vine All woods vines regardless of beight
4					Woody vine - All woody vines, regardless of height.
5					
		0	= Total Cover		Hydrophytic
	50% of total cover:	0	20% of total cover:	0	Vegetation
					Present? Yes <u>X</u> No
Remarks: (if observed, list mor	rphological adaptat	ons below).		
A positive indication of hydroph	nytic vegetation was	observed	(>50% of dominant	species index	xed as OBL, FACW, or FAC).
A positive indication of hydroph					
A positive indication of hydroph	vtic vegetation was	heerved	(Prevalence Index is	s < 3 00)	
	nytic vegetation was	observed	(Prevalence Index is	s ≤ 3.00).	
	nytic vegetation was	observed	(Prevalence Index is	s ≤ 3.00).	
	nytic vegetation was	observed	(Prevalence Index is	s ≤ 3.00).	

Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-20	N 4	95	None		<u>) </u>		Sandy Loam	
0-20	N 2	5	None	_			Sandy Loam	
		_		_				
	oncentration, D=Dep					² Location: P	L=Pore Lining, M=Matrix	← Community of the
•	s Indicators: (Appl	icable to a	•		•	DD C T III		•
Histoso	` '				Surface (S8) (L	· · · · · ·	1 cm Muck (A9)	
	Epipedon (A2)				e (S9) (LRR S ,	· ·	2 cm Muck (A10	
	Histic (A3)			-	neral (F1) (LRR	(0)		(F18) (outside MLRA 150A,
	en Sulfide (A4)			Gleyed Ma	, ,			olain Soils (F19) (LRR P, S,
	ed Layers (A5)		 ·	ed Matrix (•			nt Loamy Soils (F20)
	c Bodies (A6) (LRR I			Dark Surfa	. ,		(MLRA 153B)	
	lucky Mineral (A7) (L			ırface (F7)		Red Parent Mate	` '	
Muck P	Presence (A8) (LRR	Redox	Depressio	ns (F8)			rk Surface (TF12)	
1 cm M	luck (A9) (LRR P, T)		Marl (F	10) (LRR I	U)		Other (Explain in	n Remarks)
Deplete	ed Below Dark Surfa	ce (A11)	Deplete	ed Ochric (F11) (MLRA 1	51)	2	
<u> </u>				•	Masses (F12) (hydrophytic vegetation and
Coast F	Prairie Redox (A16) (MLRA 150	DA) Umbrid	Surface (F	F13) (LRR P, T	, U)		logy must be present, ed or problematic.
	Mucky Mineral (S1)	LRR O, S) Delta C	Ochric (F17) (MLRA 151)		dilicoo diotara	ed of problematio.
X Sandy	Gleyed Matrix (S4)		Reduce	ed Vertic (F	=18) (MLRA 15	0A, 150B)		
Sandy	Redox (S5)		Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A)		
Strippe	d Matrix (S6)		Anoma	lous Bright	t Loamy Soils (F	F20) (MLRA 14 9	9A, 153C, 153D)	
Dark S	urface (S7) (LRR P,	S, T, U)						
Restrictive	Layer (if observed)	:						
Type:								
Depth (in	nches):					Hydric	Soil Present? Yes _	X No
Remarks:						'		
A positive in	dication of hydric soi	l was obse	erved.					

Applicant/Owner: Lloyd Engineering State: Texas Sample Point Investigator(s): C. Bailey and N. Trivino Section, Township, Range: Landform (hillslope, terrace, etc.): Marsh, Saltwater Local relief (concave, convex, none): None	te: February 5, 2019
Landform (hillslope, terrace, etc.): Marsh, Saltwater Local relief (concave, convex, none): None Subregion (LRR or MLRA): None Lat: 27.865128 Long: -97.083499 Soil Map Unit Name: Ijam clay loam, rarely flooded NWI Classification:	nt: DPB037_U
Subregion (LRR or MLRA): None Lat: 27.865128 Long: -97.083499 Soil Map Unit Name: Ijam clay loam, rarely flooded NWI Classification:	N/A
Soil Map Unit Name: Ijam clay loam, rarely flooded NWI Classification:	Slope (%):
	Datum: North American Datum 1983
Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) YES (if no. explain in Remainstance of year)	E2USP
	,
Are Vegetation No Soil No or Hydrology No significantly disturbed? Are "Normal Circumstances" present?	
Are Vegetation No ,Soil No ,or Hydrology No naturally problematic? (If needed, explain any answ	vers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, impo	rtant features, etc.
Hydrophytic Vegetation Present? Yes NoX	
Hydric Soil Present? Yes No X Is the Sampled Area	
Wetland Hydrology Present? Yes No X within a Wetland? Yes	No X
Remarks:	
This point was determined not to be within a wetland due to the lack of all three wetland criteria.	
This point was determined not to be within a welland due to the lack of all three welland criteria.	
HYDROLOGY	
	minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cra	, ,
	ated Concave Surface (B8)
High Water Table (A2) Marl Deposits (B15) (LRR U) Drainage Pattern Mass Tries Linear Sulfida Odar (C4)	• •
Saturation (A3) Hydrogen Sulfide Odor (C1) Moss Trim Lines	, ,
Water Marks (B1) Oxidized Rhizospheres on Living Roots(C3) Dry-Season Water Marks (B1) Presence of Reduced Iron (C4) Crayfish Burrow	, ,
Sediment Deposits (B2) Presence of Reduced Iron (C4) Crayfish Burrows Prift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible	e on Aerial Imagery (C9)
Algal Mat or Crust (B4) Algal Mat or Crust (B4) Thin Muck Surface (C7) Geomorphic Pos	, ,
Iron Deposits (B5) Other (Explain in Remarks) Shallow Aquitard	, ,
Inundation Visible on Aerial Imagery (B7) FAC-Neutral Test	, ,
	s (D8) (LRR T, U)
Field Observations:	
Surface Water Present? Yes NoX Depth (inches):N/A	
Water Table Present? Yes NoX Depth (inches):>20	
Saturation Present? Yes NoX Depth (inches): Wetland Hydrology Present? Yes	es NoX
(includes capillary fringe)	
(includes capillary fringe)	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
(includes capillary fringe)	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	
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(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft)	% cover	Species?	Status	Number of Dominant Species	
1 Nama Observad					That Are OBL, FACW, or FAC: 0 (A)
2.						,
3.					Total Number of Dominant	
4.						в)
5.					\	´
6.					Percent of Dominant Species	
•.		0	= Total Cover		·	A/B)
	50% of total cover:		20% of total cover:	0	(/
Sapling Stratum (Plot size:			2070 01 10101 00701.		Prevalence Index Worksheet:	
1 None Observed					Total % Cover of: Multiply by:	
					OBL species 0 x 1 = 0	_
2.					FACW species 0 x 2 = 0	_
3.						-
4					FAC species 0 x 3 = 0 FACU species 0 x 4 = 0	_
5					UPL species 0 x 5 = 0	_
6			= Total Cover		Column Totals: 0 (A) 0	— _(B)
	50% of total cover:		20% of total cover:	0	Column Totals (A)	— (^{b)}
Shrub Stratum (Plot size:			20% Of total cover.		Prevalence Index = B/A = N/A	
4. Nana Ohaaniad					Prevalence index – B/A – N/A	_
					Hudunghatia Vanatatian Indiastana.	
2					Hydrophytic Vegetation Indicators:	
3					1 - Rapid Test for Hydrophytic Vegetation	
4					2 - Dominance Test is >50% 3 - Prevalence Index is ≤ 3.0 ¹	
5						
6					Problematic Hydrophytic Vegetation ¹ (Explain)	
			= Total Cover	_	1	
			20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
					Definitions of Five Vegetation Strata:	
2.					Tree - Woody plants, excluding woody vines,	
3					approximately 20 ft (6m) or more in height and 3 in.	
4					(7.6 cm) or larger in diameter at breast height (DBH).	
5					Sapling - Woody plants, excluding woody vines,	
6					approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8					tian 3 iii. (7.0 dii) DBH.	
9					Shrub - Woody plants, excluding woody vines,	
10					approximately 3 to 20 ft (1 to 6 m) in height.	
11					approximately 3 to 20 ft (1 to 6 fff) in neight.	
			= Total Cover		Harb All barbassaya (non woody) planta including	
	50% of total cover:	0	20% of total cover:	0	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size	:30_ft)				herbaceous vines, regardless of size, <u>and</u> woody	
					plants, except woody vines, less than approximately	
2					3 ft (1 m) in height.	
3.					Woody vine All woody vines resembles of height	
4					Woody vine - All woody vines, regardless of height.	
5					<u> </u>	
			= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes NoX	
Remarks: (if observed, list m	norphological adaptat	ions below).			
No positive indication of hydr	ophytic vegetation wa	as observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).	
No vegetation present.						
•						

Depth	Matrix			Redox F	eatures			
inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-20	10YR 5/1	100	None	_			Sandy Loam	
	Concentration, D=De s Indicators: (App					² Location: P	L=Pore Lining, M=Matrix	c. ematic Hydric Soils ³ :
Histos		iicabie to a			Surface (S8) (L	PP S T III	1 cm Muck (A9)	•
	Epipedon (A2)				e (S9) (LRR S ,		2 cm Muck (A9)	
					e (39) (LKK 3, neral (F1) (LRR	· ·		(F18) (outside MLRA 150A ,
	Histic (A3) gen Sulfide (A4)			Gleyed M		. 0)		plain Soils (F19) (LRR P, S,
	ed Layers (A5)			ed Matrix (, ,			nt Loamy Soils (F20)
	c Bodies (A6) (LRR	P T III		,	,		(MLRA 153B)	it Loanly Solls (1 20)
Organic Bodies (A6) (LRR P, T, U) S cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Depleted Dark Surface (F7)							Red Parent Mate	erial (TF2)
	Presence (A8) (LRR			Depressio	. ,			rk Surface (TF12)
	fuck (A9) (LRR P, T	-		10) (LRR	` '		Other (Explain in	, ,
	ed Below Dark Surfa			, .	-, (F11) (MLRA 1 5	51)		, , , , , , , , , , , , , , , , , , , ,
	Dark Surface (A12)	,			Masses (F12) (=	³ Indicators of	hydrophytic vegetation and
	Prairie Redox (A16)	(MLRA 150		-	F13) (LRR P, T		wetland hydro	logy must be present,
	Mucky Mineral (S1)	-	· —	,	7) (MLRA 151)	, -,	unless disturb	ed or problematic.
	Gleyed Matrix (S4)			•	F18) (MLRA 15	0A. 150B)		
	Redox (S5)				lain Soils (F19)	· ·		
	ed Matrix (S6)			-	, ,	•	9A, 153C, 153D)	
	surface (S7) (LRR P ,	S, T, U)		3	, (- / (,,,	
Restrictive	Layer (if observed)):						
Type:								
Depth (ir	nches):					Hydrid	Soil Present? Yes _	NoX
Remarks:								
veillai ks.								
No positive	indication of hydric s	oils was ob	served.					
•	,							

Project/Site:		Bluewater SPM		County:	Nueces	Sampling	Date: Fe	ebruary 5, 2019	
Applicant/Owner:		Lloyd Engir	neering	Star			Point:	•	
Investigator(s):		and _		Section, Township		<u> </u>	N/A		
Landform (hillslope, ter				Local relief (conc	ave, convex, non	e): None	Slope (%):	0-5	
Subregion (LRR or MLI				Lat:27.8	66105 Lor	ng:	1 Datum	: North American Datum 1983	
Soil Map Unit Name:		ljar		looded		NWI Classification:		N/A	
Are climatic / hydrologic	conditions on	the site typical for t	his time of year?	(Yes / No)	YES	(if no, explain in Re	marks.)		
Are Vegetation	No,Soil	No ,or Hydrolog	gy No signif	ficantly disturbed?	Are "Normal Cir	cumstances" prese	nt? Yes	X No	
Are Vegetation	No,Soil	No ,or Hydrolog	y <u>No</u> natur	ally problematic?	(If ne	eded, explain any a	nswers in Ren	narks.)	
SUMMARY OF F	INDINGS -	Attach site m	ap showing s	sampling poin	it locations,	transects, im	portant fe	atures, etc.	
							<u> </u>		
Hydrophytic Vegetation	n Present?	Yes	No X						
Hydric Soil Present?	iii iosoiii:	Yes	No X	Is the Samp	led Δrea				
Wetland Hydrology Pr	esent?	Yes	No X	within a We		Yes	No	X	
Trouding Try and one gy Tr									
Remarks:									
This point was det	ermined not to	be within a wetland	due to the lack of	all three wetland cr	riteria				
This point was de	emined not to	be within a wettand	due to the lack of	all tillee wetland ci	iteria.				
HYDROLOGY									
Wetland hydrolo					<u>:</u>	Secondary Indicato		f two required)	
-	•	one is required; chec				Surface Soil	, ,		
Surface Wa	` ,	_	Aquatic Fauna	, ,	-			ve Surface (B8)	
High Water		_		(B15) (LRR U)	-	Drainage Pat			
Saturation (•	_		fide Odor (C1)	-	Moss Trim Li	, ,		
Water Mark	` ,	_	Oxidized Rhiz	ospheres on Living	Roots(C3)		Water Table (0	C2)	
Sediment D	eposits (B2)	_	Presence of R	Reduced Iron (C4)	-	Crayfish Burr	ows (C8)		
Drift Deposi	ts (B3)	_	Recent Iron R	eduction in Tilled S	ioils (C6)	Saturation Vi	sible on Aerial	Imagery (C9)	
Algal Mat or	Crust (B4)	_	Thin Muck Su	rface (C7)	_	Geomorphic	Position (D2)		
Iron Deposi	s (B5)	_	Other (Explain	n in Remarks)	_	Shallow Aqui	tard (D3)		
Inundation \	/isible on Aeria	al Imagery (B7)			_	FAC-Neutral	Test (D5)		
Water-Stair	ed Leaves (B9	9)			-	Sphagnum m	noss (D8) (LRF	R T, U)	
5 11101 //									
Field Observations:	10 1/		5 " " 1						
Surface Water Preser		NoX		· ——					
Water Table Present?		NoX	_ ' `	· —	Wedler dilled	- I D +0	W	N. V	
Saturation Present? (includes capillary frin	Yes	NoX	Depth (inche	es): <u>>20</u>	wetiand Hydro	ology Present?	Yes	NoX	
` ' '	5 ,	n gauge, monitoring	well aerial photos	previous inspectio	ns) if available				
Booting (1000) do	a Bata (otroan	r gaago, montoning	won, donar priotos,	providuo mopodilo	no), ii availabio.				
Remarks:									
No positive indica	ion of wetland	hydrology was obse	erved.						

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft \	% cover	Species?	Status	Number of Dominant Species	
4 44 64 4			Оресіез:	Otatus	·	/A\
					That Are OBL, FACW, or FAC:	(A)
2						
3					Total Number of Dominant	
4					Species Across All Strata: 0	(B)
5						
6					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC:	(A/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1. None Observed	·				Total % Cover of: Multiply by:	Ì
2.					OBL species 0 x 1 = 0	
3.				-	FACW species 0 x 2 = 0	_
					FAC species 0 x 3 = 0	_
4			-		· — — — — — — — — — — — — — — — — — — —	_
5						-
6					UPL species	—
			= Total Cover		Column Totals: (A) 0	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = N/A	
1. None Observed						
2.					Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
4.					2 - Dominance Test is >50%	
5.					3 - Prevalence Index is ≤ 3.0 ¹	
					Problematic Hydrophytic Vegetation ¹ (Explain)	
6			T-1-1-0		Problematic Hydrophytic vegetation (Explain)	
			= Total Cover	_	1	
		0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
1. None Observed					Definitions of Five Vegetation Strata:	
2					Tree - Woody plants, excluding woody vines,	
3					approximately 20 ft (6m) or more in height and 3 in.	
4					(7.6 cm) or larger in diameter at breast height (DBH).	
5.						
6.					Sapling - Woody plants, excluding woody vines,	
			-		approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8						
9					Shrub - Woody plants, excluding woody vines,	
10						
11					approximately 3 to 20 ft (1 to 6 m) in height.	
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size	:30 ft)				herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2.					3 ft (1 m) in height.	
3.						
4.					Woody vine - All woody vines, regardless of height.	
						i
5	-		= Total Cover		Lindrambudia	
			= Total Cover	_	Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes NoX	
Remarks: (if observed, list m	norphological adaptat	ions below).			
No positive indication of buds	anhutia vagatatian uu		d (>EOO/ of dominan	t anasias inde	aved as EAC as dries)	
No positive indication of hydr	opnytic vegetation wa	as observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).	
No vegetation present.						

Color (moist)	Depth	Matrix			Redox F					
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Pydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	inches)_	Color (moist)	%	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks	
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Histosol (A1)							Location: P			
Histic Epipedon (A2) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A, Edamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A, Edamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A, Edamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A, Edamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F19) (LRR P, S, T) Reduced Vertic (F19) (LRR P, S, T) Piedmont Floodplain Soils (F19) (LRR P, S, T) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF2) Red Parent Material (TF2) Red Parent Material (TF2) Per Shallow Dark Surface (F1) Red Parent Material (TF2) Per Shallow Dark Surface (TF12) Other (Explain in Remarks) 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) Piedmont Floodplain Soils (F19) (MLRA 150A) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X			licable to al				DD C T III			
Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Mucky Mineral (A7) (LRR P, T, U) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 153B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Dark Surface (F7) Redox Depressions (F8) Depleted Deriv (F11) (MLRA 151) Thick 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) Dark Surface (S7) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No XX		` '				` , `				
Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Dark Surface (F7) Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR O, P, T) Other (Explain in Remarks) Other (Explain in Remarks) Jandicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes NoX							· ·		•	
Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Pedeted Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Ozark Surface (F6) (MLRA 153B) Red Parent Material (TF2) Muck Presence (A8) (LRR U) Redox Depressions (F8) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF2) (MLRA 151) Persent? Yes No X anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF2) (MLRA 151) Persent? Yes No X anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF2) (MLRA 151) Persent? Yes No X anomalous Bright Loamy Soils (F20) Anomalous Bright Loamy Soils (P20) No X		` '			-		0)			
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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) Restrictive Layer (if observed): Type: Depth (inches): Depth (inches): Deta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Reduced Vertic (F18) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Hydric Soil Present? Yes No X		, ,	(MLRA 150		-	, ,	· · · · ·	,	0, ,	
Sandy Gleyed Matrix (S4)		` '	•	· —	,		,	unless disturbe	ed or problematic.	
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) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	Sandy	Gleyed Matrix (S4)			•		DA, 150B)			
Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X				Piedmo	ont Floodp	lain Soils (F19)	(MLRA 149A)			
Restrictive Layer (if observed): Type:	 Strippe	d Matrix (S6)		Anoma	lous Brigh	t Loamy Soils (F	20) (MLRA 14	9A, 153C, 153D)		
Type:	Dark S	urface (S7) (LRR P,	S, T, U)							
Type:	Poetrictivo	l aver (if observed)	·				1			
Depth (inches): NoX		Layer (II Observed)	,.							
							11	- Call Brossett	No. V	
Remarks:	Depth (in	icnes):					Hyari	c Soil Present? Yes _	NOX	
Remarks:										
	kemarks:									
	10 000									
No positive indication of hydric soils was observed.										

Project/Site:	Bluewater SPM	Cou	unty:	Nueces	Sampling D	Date: February 5, 2019
Applicant/Owner:	Lloyd Engineer		State			oint: DPB039 PSS
			ction, Township,		·	N/A
Landform (hillslope, terrace, etc			cal relief (conca	· —	e): None	Slope (%): 0-5
Subregion (LRR or MLRA):						Datum: North American Datum 1983
Soil Map Unit Name:		y loam, rarely flood			NWI Classification:	_
Are climatic / hydrologic conditi	ons on the site typical for this	ime of year? (Y	'es / No)		- if no, explain in Rem)	
Are Vegetation No,	Soil No ,or Hydrology	No significan	itly disturbed?	Are "Normal Cir	rcumstances" presen	nt? Yes X No
Are Vegetation No,	Soil No ,or Hydrology	No naturally	problematic?	(If ne	eded, explain any an	iswers in Remarks.)
SUMMARY OF FINDIN	IGS - Attach site man	showing sam	nolina noint	locations	transacts imn	portant features, etc
- COMMINANT OF THE		Jilowing Jun	ipinig point	1000110113,	transcots, imp	ortant reatures, etc.
Hydrophytic Vegetation Prese	nt? Yes X	No				
Hydric Soil Present?		No	Is the Sample	ed Area		
Wetland Hydrology Present?	YesX	No	within a Wet	and?	Yes X	No
Remarks:						
This point was determined HYDROLOGY	I to be within a wetland due to	the presence of all	3 wetland criteri	a. 		
Wetland hydrology India	eators:				0	(
, ,		I that apply)			•	s (minimum of two required)
Surface Water (A1)	um of one is required; check a	Aquatic Fauna (B1	13)		Surface Soil C	etated Concave Surface (B8)
High Water Table (A		Marl Deposits (B1		-	Sparsery vege Drainage Patte	
X Saturation (A3)		Hydrogen Sulfide		-	Moss Trim Line	
Water Marks (B1)		Oxidized Rhizosph		Roots(C3)		/ater Table (C2)
Sediment Deposits	(B2)	Presence of Redu	-	` ' -	Crayfish Burro	, ,
Drift Deposits (B3)	·	Recent Iron Reduc	, ,	_		ible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Thin Muck Surface	e (C7)	_	Geomorphic P	osition (D2)
Iron Deposits (B5)	· —	Other (Explain in F	Remarks)	_	Shallow Aquita	ard (D3)
Inundation Visible o	n Aerial Imagery (B7)			_	X FAC-Neutral T	est (D5)
Water-Stained Leav	/es (B9)			_	Sphagnum mo	oss (D8) (LRR T, U)
Field Observations:						
Surface Water Present?	Yes NoX	Depth (inches):	N/A			
	Yes NoX	Depth (inches):				
	YesX No	Depth (inches):	0	Wetland Hydr	ology Present?	YesX No
(includes capillary fringe)						
Describe Recorded Data (stream gauge, monitoring well	, aerial photos, prev	vious inspection	s), if available:		
Domarko						
Remarks:						
A positive indication of we	tland hydrology was observed	(at least one prima	ry indicator)			
, t positivo indication or mo	aana nyarology mae ozeel roa	(at loadt died priina	yu ou.o <i>y</i> .			

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft.)	% cover	Species?	Status	Number of Dominant Species	
					That Are OBL, FACW, or FAC:1 (A))
2.						
3.					Total Number of Dominant	
4.					Species Across All Strata: 1 (B))
5.						
6.					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC: 100% (A/	/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:					Prevalence Index Worksheet:	
1. None Observed					Total % Cover of: Multiply by:	İ
2.					OBL species 100 x 1 = 100	-
3.					FACW species 0 x 2 = 0	-
4.					FAC species 0 x 3 = 0	-
5.					FACU species 0 x 4 = 0	-
6.					UPL species 0 x 5 = 0	-
·-			= Total Cover			- (B)
	50% of total cover:		20% of total cover:	0	(i.i.	- (")
Shrub Stratum (Plot size:			20% of total cover.		Prevalence Index = B/A = 1.00	
4. 4. 4		100	Yes	OBL	1 revalence index = B//(= 1.00	-
				OBL	Hydrophytic Vegetation Indicators:	
2.					1 - Rapid Test for Hydrophytic Vegetation	
3.					X 2 - Dominance Test is >50%	
4					X 3 - Prevalence Index is $\leq 3.0^{1}$	
5					Problematic Hydrophytic Vegetation ¹ (Explain)	
6		400			Froblematic Hydrophytic vegetation (Explain)	
	500/ · f t · t · l · · · · · ·		= Total Cover	20	16. 18. 14. 11. 11. 11. 11. 11. 11. 11. 11. 11	
Hart Otratam (District	50% of total cover:	50	20% of total cover:	20	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30_π)				be present, unless disturbed or problematic.	
					Definitions of Five Vegetation Strata:	
2.					Tree - Woody plants, excluding woody vines,	
3					approximately 20 ft (6m) or more in height and 3 in.	
4					(7.6 cm) or larger in diameter at breast height (DBH).	
5					Conline Woody plants evaluding woody vines	
6					Sapling - Woody plants, excluding woody vines,	
7					approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.	
8					tian 3 iii. (7.0 dii) DBH.	
9					Shrub - Woody plants, excluding woody vines,	
10						
11					approximately 3 to 20 ft (1 to 6 m) in height.	
			= Total Cover		Hards All book on the Control of the	
	50% of total cover:	0	20% of total cover:	0	Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, <u>and</u> woody	
Woody Vine Stratum (Plot size:	30 ft)					
1. None Observed					plants, except woody vines, less than approximately	
2					3 ft (1 m) in height.	
3					Washing Allowabida B. C. C.	
4					Woody vine - All woody vines, regardless of height.	
5						
		0	= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes X No	
Remarks: (if observed, list me	orphological adaptat	ions below).			
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	species index	xed as OBL_FACW_or FAC)	
7 positive indication of flydrop	my no vegetation was	ODSCIVEG	(+ 00 % or dominant	opeoles index	Red as GBE, 1710VV, of 1710).	
A positive indication of hydrop	hytic vegetation was	heerved	(Prevalence Index is	s < 3 NN		
A positive indication of hydrop	my no vegetation was	, Justi veu	(i revalence muex i	o = 0.00j.		

Depth	Matrix			Redox F	eatures				
inches)	Color (moist)	%	Color (moist)	%_	Type ¹	Loc ²	Texture	Remarks	
0-3	2.5Y 5/1	100	None				Sandy Loam		
3-20	N 4	_98_	10YR 5/4	_2_	C	PL	Sandy Loam		
Type: C=C	 Concentration, D=De	 pletion, RN	 /I=Reduced Matrix, M	 S=Masked	 d Sand Grains.	² Location: P	 L=Pore Lining, M=Matrix.		
lydric Soil	s Indicators: (Appl	icable to	all LRRs, unless otl	nerwise no	oted.)		Indicators for Problem	natic Hydric Soils ³ :	
Histose	ol (A1)		Polyval	ue Below S	Surface (S8) (LI	RR S, T, U)	1 cm Muck (A9) (I	LRR O)	
Histic I	Epipedon (A2)		Thin Da	ark Surface	e (S9) (LRR S,	Γ, U)	2 cm Muck (A10)	(LRR S)	
Black I	Histic (A3)		Loamy	Mucky Min	eral (F1) (LRR	O)	Reduced Vertic (F	18) (outside MLRA 150A,E	
Hydrog	gen Sulfide (A4)		Loamy	Gleyed Ma	atrix (F2)		Piedmont Floodpl	ain Soils (F19) (LRR P, S, T	
Stratifi	ed Layers (A5)		Deplete	ed Matrix (F	=3)		Anomalous Bright	Loamy Soils (F20)	
Organi	ic Bodies (A6) (LRR	P, T, U)	Redox	Dark Surfa	ice (F6)		(MLRA 153B)		
5 cm N	cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7)						Red Parent Mater	ial (TF2)	
Muck I	Presence (A8) (LRR	U)	Redox Depressions (F8)				Very Shallow Dar	k Surface (TF12)	
1 cm N	Muck (A9) (LRR P, T)	Marl (F	10) (LRR (J)		Other (Explain in	Remarks)	
Deplet	ed Below Dark Surfa	ice (A11)	Deplete	ed Ochric (F11) (MLRA 15	1)			
Thick I	Dark Surface (A12)		Iron-Ma	inganese N	Masses (F12) (I	LRR O, P, T)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
Coast	Prairie Redox (A16)	(MLRA 15	0A) Umbric	Surface (F	13) (LRR P, T,	U)			
Sandy	Mucky Mineral (S1)	(LRR O, S) Delta C	chric (F17) (MLRA 151)		uniess disturbe	d of problematic.	
X Sandy	Gleyed Matrix (S4)		Reduce	ed Vertic (F	18) (MLRA 15 0	A, 150B)			
X Sandy	Redox (S5)		Piedmo	nt Floodpla	ain Soils (F19) (MLRA 149A)			
Strippe	ed Matrix (S6)		Anoma	ous Bright	Loamy Soils (F	20) (MLRA 14 9	9A, 153C, 153D)		
Dark S	Surface (S7) (LRR P,	S, T, U)							
Restrictive	Layer (if observed)):							
Type:									
Depth (in	nches):					Hydric	Soil Present? Yes	X No	
Remarks:									

Project/Site:	Bluewater SPM	C	county:	Nueces	Sa	ampling Date:	February 5, 2019
Applicant/Owner:	Lloyd Engineer		State				DPB040 PEM
· · · — — — — — — — — — — — — — — — — —			Section, Township	·		 N/	
Landform (hillslope, terrace, etc.)		ter L	ocal relief (conca	ve, convex, no	one): No	one Slo	ope (%): 0-5
Subregion (LRR or MLRA):							Datum: North American Datum 1983
Soil Map Unit Name:		y loam, rarely floo				fication:	
Are climatic / hydrologic condition	ns on the site typical for this t	time of year?	(Yes / No)	YES		in in Remarks	
Are Vegetation No,So	oil No ,or Hydrology	No significa	antly disturbed?	Are "Normal C	 Circumstance:	s" present?	Yes X No
Are Vegetation No,So	oil No ,or Hydrology	No naturall	y problematic?	(If n	needed, expla	in any answer	rs in Remarks.)
SUMMARY OF FINDING	3S - Attach site man	showing sa	mnling noin	locations	transoci	ts import	ant features etc
		Jilowing Su	Inpling point		, transco	is, import	unt routures, etc.
Hydrophytic Vegetation Present		No					
Hydric Soil Present?	Yes X	No	Is the Sampl	ed Area			
Wetland Hydrology Present?	Yes X	No	within a Wet	land?	Yes _	X	No
·	o be within a wetland due to	the presence of a	all 3 wetland criter	ia.			
HYDROLOGY							
Wetland hydrology Indica	tors:				Secondary	Indicators (mir	nimum of two required)
Primary Indicators (minimun	n of one is required; check al	ll that apply)			Surfa	ce Soil Crack	s (B6)
X Surface Water (A1)	<u>_X</u>	Aquatic Fauna (I	B13)		Spars	sely Vegetated	d Concave Surface (B8)
High Water Table (A2		Marl Deposits (B				age Patterns	•
Saturation (A3)		Hydrogen Sulfide	, ,			Trim Lines (B	*
Water Marks (B1)			pheres on Living	Roots(C3)		eason Water	, ,
Sediment Deposits (B		Presence of Rec	, ,			ish Burrows (0	· ·
Drift Deposits (B3)			luction in Tilled So	ils (C6)			on Aerial Imagery (C9)
Algal Mat or Crust (B4	4)	Thin Muck Surfa	, ,			norphic Positio	, ,
Iron Deposits (B5)		Other (Explain in	n Remarks)			ow Aquitard ([·
Inundation Visible on						Neutral Test (, ,
Water-Stained Leave	s (B9)				Spha	gnum moss (L	D8) (LRR T, U)
Field Observations:							
	esX No	Depth (inches)): 1				
	es No X	Depth (inches)	′ ——				
	es No X	Depth (inches)		Wetland Hvo	drology Pres	ent? Yes	X No
(includes capillary fringe)		2004(). <u> </u>				
Describe Recorded Data (st	tream gauge, monitoring well	, aerial photos, pr	revious inspection	s), if available:	:		
Remarks:							
Remarks.							
A positive indication of wetla	and hydrology was observed	(at least one prim	nary indicator).				
Aquatic Fauna: fish, crabs.							

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft \	% cover	Species?	Status	Number of Dominant Species	
1 None Observed		70 COVE	Оресіез:	Otatus	·	(A)
					That Are OBL, I ACW, OF I AC.	^)
2					Total Number of Dominant	
3			·			D)
4					Species Across All Strata: 2 ((B)
5						
6	 		T-1-1-0		Percent of Dominant Species	(A (D)
	500/ 5/ / /		= Total Cover	•	That Are OBL, FACW, or FAC: 100% (A	(A/B)
	50% of total cover:	0	20% of total cover:	0	Prevalence Index Worksheet:	
Sapling Stratum (Plot size:	30 ft.)					
1. None Observed			· —		Total % Cover of: Multiply by:	_
2			<u> </u>		OBL species x 1 =100	_
3			<u> </u>		FACW species 0 x 2 = 0	_
4			<u> </u>		FAC species 0 x 3 = 0	_
5			· ——		FACU species 0 x 4 = 0	_
6					UPL species 0 x 5 = 0	_
			= Total Cover		Column Totals: (A) 100	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = 1.00	
1. None Observed			. <u> </u>			
2					Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
4.					X 2 - Dominance Test is >50%	
5.			·		X 3 - Prevalence Index is ≤ 3.0 ¹	
6.			· <u></u>		Problematic Hydrophytic Vegetation ¹ (Explain)	
		0	= Total Cover			
	50% of total cover:		20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)		. —•		be present, unless disturbed or problematic.	
1. Batis maritima	/	55	Yes	OBL	Definitions of Five Vegetation Strata:	
Spartina alterniflora		45	Yes	OBL	Tree - Woody plants, excluding woody vines,	
3.					approximately 20 ft (6m) or more in height and 3 in.	
4.					(7.6 cm) or larger in diameter at breast height (DBH).	
					(7.0 om) of larger in diameter at breast neight (BBH).	
5					Sapling - Woody plants, excluding woody vines,	
6					approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8						
9			<u> </u>		Shrub - Woody plants, excluding woody vines,	
10					approximately 3 to 20 ft (1 to 6 m) in height.	
11		400	T-1-1-0		Sept samuely of the 20 ft (1 to 0 fil) in neight.	
	500/ · 54.1.1		•	20	Herb - All herbaceous (non-woody) plants, including	
	50% of total cover:	50	20% of total cover:	20	herbaceous vines, regardless of size, <u>and</u> woody	
Woody Vine Stratum (Plot size:	30 ft)				plants, except woody vines, less than approximately	
1. None Observed					3 ft (1 m) in height.	
2					3 it (1 iii) iii neigiit.	
3					Marada and a street of the state of the stat	
4					Woody vine - All woody vines, regardless of height.	
5						
		0	= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes X No	
Remarks: (if observed, list mo	orphological adaptati	ons below).			
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	species index	xed as OBL, FACW, or FAC).	
, , , , , , , , , ,	, , ,				, ,	
A positive indication of hydrop	hytic vegetation was	observed	(Prevalence Index is	s ≤ 3.00).		

Depth	Matrix			Redox F	eatures			
inches)	Color (moist)	%	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks
0-3	2.5Y 5/1	100	None				Sandy Loam	
3-20	N 4	_98_	10YR 5/4	_2_	C	PL	Sandy Loam	
						2		
	Concentration, D=De					*Location: F	PL=Pore Lining, M=Matrix	•
•	s Indicators: (Appl	icable to a	•		•	DD C T III		ematic Hydric Soils ³ :
Histoso	` '				Surface (S8) (L	· · · · · ·	1 cm Muck (A9)	
	Epipedon (A2)				e (S9) (LRR S,		2 cm Muck (A10	
	Histic (A3)			-	neral (F1) (LRR	. 0)		(F18) (outside MLRA 150A ,I
	gen Sulfide (A4) ed Layers (A5)			Gleyed Ma ed Matrix (l	, ,			blain Soils (F19) (LRR P, S, 1 nt Loamy Soils (F20)
	c Bodies (A6) (LRR	D T II\		Dark Surfa	,			it Loamy Soils (F20)
	lucky Mineral (A7) (L			ed Dark Su			(MLRA 153B) Red Parent Mate	orial (TE2)
	Presence (A8) (LRR		<i></i> '	Depressio	, ,			irk Surface (TF12)
	fuck (A9) (LRR P, T	•		10) (LRR I	` '		Other (Explain in	, ,
	ed Below Dark Surfa				F11) (MLRA 1 8	51)	Other (Explain ii	i i temarka)
	Dark Surface (A12)	100 (7111)			Masses (F12) (³ Indicators of	hydrophytic vegetation and
	Prairie Redox (A16)	(MI RA 150		-	=13) (LRR P, T			logy must be present,
	Mucky Mineral (S1)				(MLRA 151)	, 0,	unless disturb	ed or problematic.
	Gleyed Matrix (S4)	(LIXIX 0, 0)		•	7 (MLRA 101) F18) (MLRA 15	0A 150B)		
	Redox (S5)			,	ain Soils (F19)	· ·		
	ed Matrix (S6)			-		-	9A, 153C, 153D)	
	urface (S7) (LRR P,	S. T. U)		nodo Brigin	Learny cone (i	20) (III 21 0 1 1 -	ort, 1000, 100D,	
Bain 0	unaco (c/) (211117 ,	0, 1, 0,						
Restrictive	Layer (if observed)):						
Type:								
	nches):					Hydri	c Soil Present? Yes	X No
	,					1	_	
Remarks:						•		
A positive in	dication of hydric so	il was obse	rved.					
•	•							

Project/Site:	Bluewater SPM	Cou	unty:	Nueces	Sampling	g Date: Fe	ebruary 5, 2019
Applicant/Owner:	Lloyd Engineer		State			Point:	
			ction, Township,		<u> </u>	N/A	
Landform (hillslope, terrace, e		ter Loc	cal relief (conca	/e, convex, nor	ne): None	Slope (%):	0-5
Subregion (LRR or MLRA):						_	North American Datum 1983
Soil Map Unit Name:		y loam, rarely flood			NWI Classification		N/A
Are climatic / hydrologic condi	tions on the site typical for this t	time of year? (Y	'es / No)				
Are Vegetation No	,Soil No ,or Hydrology	No significan	tly disturbed?	Are "Normal Ci	rcumstances" pres	ent? Yes	X No
Are Vegetation No	,Soil No ,or Hydrology	No naturally	problematic?	(If ne	eded, explain any	answers in Ren	narks.)
SUMMARY OF FINDI	NGS - Attach site map	showing sam	nling noint	Incations	transacts im	nortant fo	aturas atc
- COMMINANT OF THE	- Attach Site map	Jilowing Juli	ipinig ponit		trunscots, in	iportant io	
Hydrophytic Vegetation Pres	ent? Yes X	No					
Hydric Soil Present?		No	Is the Sample	ed Area			
Wetland Hydrology Present?	YesX	No	within a Wetl	and?	Yes X	_ No	
Remarks:							
	ed to be within a wetland due to	the presence of all	3 wetland criteri	a. 			
HYDROLOGY Wetland hydrology Indi	icatore:						
, ,					Secondary Indicate	,	f two required)
	num of one is required; check al		10)			Cracks (B6)	O f (DO)
Surface Water (A1	· —	Aquatic Fauna (B1 Marl Deposits (B1)		•			ve Surface (B8)
High Water Table X Saturation (A3)		Hydrogen Sulfide			Moss Trim L	itterns (B10)	
Water Marks (B1)		Oxidized Rhizosph		Roots(C3)		Water Table (0	22)
Sediment Deposits		Presence of Redu	_		Crayfish Bur	•	<i>5</i> 2)
Drift Deposits (B3)	· · · —	Recent Iron Reduc	, ,	ils (C6)		isible on Aerial	Imagery (C9)
Algal Mat or Crust		Thin Muck Surface		()		Position (D2)	g, (,
Iron Deposits (B5)		Other (Explain in F			Shallow Aqu		
	on Aerial Imagery (B7)	· · · · · · · · · · · · · · · · ·	,		X FAC-Neutra		
Water-Stained Lea						noss (D8) (LRF	R T. U)
						, , ,	. ,
Field Observations:							
Surface Water Present?	Yes NoX	Depth (inches):	N/A				
Water Table Present?	Yes NoX	Depth (inches):					
	YesX No	Depth (inches):	0	Wetland Hydr	rology Present?	Yes X	_ No
(includes capillary fringe)							
Describe Recorded Data	(stream gauge, monitoring well	, aerial photos, prev	vious inspections	s), if available:			
Remarks:							
A positive indication of w	etland hydrology was observed	(at least one prima	ry indicator)				
A positive indication of w	stiand hydrology was observed	(at least one prima	ry malcator).				

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft.)	% cover		Status	Number of Dominant Species
4 14 64 4	70 00 001	<u>оролоо :</u>	Otatao	That Are OBL, FACW, or FAC: 1 (A)
1. None Observed 2	-	· ——		That Ale obe, I Nov, Si I No.
3	-	·		Total Number of Dominant
4.		<u> </u>		Species Across All Strata: 1 (B)
		· ——		Species / Michaela.
5 6				Percent of Dominant Species
·	0	= Total Cover		That Are OBL, FACW, or FAC: 100% (A/B)
50% of total cover		20% of total cover:	0	110070 (705)
Sapling Stratum (Plot size: 30 ft.)		20% of total cover.		Prevalence Index Worksheet:
1 Nana Observed				Total % Cover of: Multiply by:
				OBL species 100 x 1 = 100
2				FACW species 0 x 2 = 0
3				FAC species 0 x 3 = 0
4				FACU species 0 x 4 = 0
5				UPL species 0 x 5 = 0
6	0	= Total Cover		Column Totals: 100 (A) 100 (B)
50% of total cover		20% of total cover:	Λ	(A) 100 (B)
Shrub Stratum (Plot size: 30 ft.)		2070 OI LOLAI COVEI.		Prevalence Index = B/A = 1.00
	100	Voc	OBL	Prevalence index – B/A – 1.00
		Yes	UBL	Hydrophytic Vegetation Indicators:
2		<u> </u>		1 - Rapid Test for Hydrophytic Vegetation
3		<u> </u>		X 2 - Dominance Test is >50%
4	-			X 3 - Prevalence Index is $\leq 3.0^{1}$
5		· —		Problematic Hydrophytic Vegetation ¹ (Explain)
6	400			Problematic Hydrophytic Vegetation (Explain)
500/ - 54-4-1		= Total Cover	20	16. 45. 45
50% of total cover	: 50	20% of total cover:	20	Indicators of hydric soil and wetland hydrology must
Herb Stratum (Plot size: 30 ft.)				be present, unless disturbed or problematic.
1. None Observed		· ——		Definitions of Five Vegetation Strata:
2				Tree - Woody plants, excluding woody vines,
3				approximately 20 ft (6m) or more in height and 3 in.
4				(7.6 cm) or larger in diameter at breast height (DBH).
5				Sapling - Woody plants, excluding woody vines,
6				approximately 20 ft (6 m) or more in height and less
7		·		than 3 in. (7.6 cm) DBH.
8				man o m. (7.0 om) BBM.
9				Shrub - Woody plants, excluding woody vines,
10				approximately 3 to 20 ft (1 to 6 m) in height.
11		- 		approximately 5 to 25 ft (1 to 5 ff) if floight.
500/ 51 1 1		= Total Cover	0	Herb - All herbaceous (non-woody) plants, including
50% of total cover	:0	20% of total cover:		herbaceous vines, regardless of size, <u>and</u> woody
Woody Vine Stratum (Plot size: 30 ft.)				plants, except woody vines, less than approximately
1. None Observed				3 ft (1 m) in height.
2		·		o it (1 m) in noight.
3		·		Woody vine - All woody vines, regardless of height.
4				Woody vine - All woody vines, regardless of neight.
5				Hadasahada
500/ - 54-4-1		= Total Cover	0	Hydrophytic
50% of total cover	: 0	20% of total cover:	0	Vegetation
				Present? Yes <u>X</u> No
Damanda, (if also much list much state and sta	diame to t	`		
Remarks: (if observed, list morphological adapta	tions below).		
A positive indication of hydrophytic vegetation wa	s observed	(>50% of dominant	species index	xed as OBL, FACW, or FAC).
A positive indication of hydrophytic vegetation wa	s observed	(Prevalence Index is	s ≤ 3.00).	

epth	Matrix			Redox F	eatures			
nches)	Color (moist)	_%_	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks
0-3	2.5Y 5/1	100	None				Sandy Loam	
3-20	N 4	98	10YR 5/4_	_2_	C	PL	Sandy Loam	
Гуре: C=Cor	ncentration, D=Dep	oletion, RM=	Reduced Matrix, N	//S=Maske	d Sand Grains.	² Location: F	L=Pore Lining, M=Matrix	ζ.
lydric Soils I	Indicators: (Appl	icable to all	LRRs, unless of	herwise n	oted.)		Indicators for Proble	ematic Hydric Soils ³ :
Histosol ((A1)				Surface (S8) (L		1 cm Muck (A9)	(LRR O)
Histic Epi	ipedon (A2)		Thin D	ark Surfac	e (S9) (LRR S,	T, U)	2 cm Muck (A10) (LRR S)
Black His	stic (A3)		Loamy	Mucky Mir	neral (F1) (LRR	O)	Reduced Vertic	(F18) (outside MLRA 150A,I
Hydroger	n Sulfide (A4)		Loamy	Gleyed Ma	atrix (F2)		Piedmont Flood	olain Soils (F19) (LRR P, S, T
Stratified	Layers (A5)		Deplet	ed Matrix (F3)		Anomalous Brigh	nt Loamy Soils (F20)
Organic E	Bodies (A6) (LRR I	P, T, U)	Redox	Dark Surfa	ace (F6)		(MLRA 153B)	
	cky Mineral (A7) (L		Deplet	ed Dark Sเ	ırface (F7)		Red Parent Mate	
Muck Pre	esence (A8) (LRR	U)	Redox	Depressio	ns (F8)			rk Surface (TF12)
	ck (A9) (LRR P, T)		Marl (F	10) (LRR	U)		Other (Explain in	Remarks)
Depleted	Below Dark Surfa	ce (A11)			F11) (MLRA 1 5	-	•	
	rk Surface (A12)			-	Masses (F12) (hydrophytic vegetation and
Coast Pra	airie Redox (A16)	(MLRA 150 <i>A</i>	· —	,	F13) (LRR P, T	U)		logy must be present, ed or problematic.
	ucky Mineral (S1)	(LRR O, S)	Delta (Ochric (F17	') (MLRA 151)		นเมอออ นเอเนเม	on problematio.
	leyed Matrix (S4)			,	=18) (MLRA 15	· ·		
X Sandy Re	edox (S5)			-	ain Soils (F19)	-		
	Matrix (S6)		Anoma	alous Brigh	t Loamy Soils (F	(20) (MLRA 14	9A, 153C, 153D)	
Dark Sur	face (S7) (LRR P,	S, T, U)						
Type:						II. alai	o Coil Broomto Voc	V. No.
						Hydri	c Soil Present? Yes _	X No
Type: Depth (inch						Hydri	c Soil Present? Yes _	X No
Type: Depth (inch	nes):					Hydri	c Soil Present? Yes _	X No
Type: Depth (inch						Hydri	c Soil Present? Yes _	X No
Type: Depth (inch	nes):					Hydri	c Soil Present? Yes _	XNo
Type: Depth (inch	nes):					Hydri	c Soil Present? Yes _	X No
Type: Depth (inch	nes):					Hydri	c Soil Present? Yes _	X No
Type: Depth (inch	nes):					Hydri	c Soil Present? Yes _	X No
Type: Depth (inch	nes):					Hydri	c Soil Present? Yes _	X No
Type: Depth (inch	nes):					Hydri	c Soil Present? Yes _	X No
Type: Depth (inch	nes):					Hydri	c Soil Present? Yes _	X No
Type: Depth (inch	nes):					Hydri	c Soil Present? Yes _	X No
Type: Depth (inch	nes):					Hydri	c Soil Present? Yes _	XNo
Type: Depth (inch	nes):					Hydri	c Soil Present? Yes _	X No
Type: Depth (inch	nes):					Hydri	c Soil Present? Yes _	X No
Type: Depth (inch	nes):					Hydri	c Soil Present? Yes _	X No
Type: Depth (inch	nes):					Hydri	c Soil Present? Yes _	X No
Type: Depth (inch	nes):					Hydri	c Soil Present? Yes _	X No
Type: Depth (inch	nes):					Hydri	c Soil Present? Yes _	X No
Type: Depth (inch	nes):					Hydri	c Soil Present? Yes _	X No
Type: Depth (inch	nes):					Hydri	c Soil Present? Yes _	X No
Type: Depth (inch	nes):					Hydri	c Soil Present? Yes _	X No
Type: Depth (inch	nes):					Hydri	c Soil Present? Yes _	X No
Type: Depth (inch	nes):					Hydri	c Soil Present? Yes _	X No
Type: Depth (inch	nes):					Hydri	c Soil Present? Yes _	X No
Type: Depth (inch	nes):					Hydri	c Soil Present? Yes _	X No

Project/Site:		Bluewater SPM		County:	Nueces	Sampling	Date: F	ebruary 5, 2019
Applicant/Owner:		Lloyd Engi	ineering	Sta			Point:	
Investigator(s):		and _		Section, Townshi		<u> </u>	N/A	
Landform (hillslope, ter				Local relief (conc	ave, convex, no	ne): None	Slope (%):	0-5
Subregion (LRR or MLI			е	Lat:27.8	367404 Lo	ong: -97.08454	3 Datum	: North American Datum 1983
Soil Map Unit Name:		ljan	n clay loam, rarely			NWI Classification:		N/A
Are climatic / hydrologic	conditions on	the site typical for	this time of year?	(Yes / No)	YES	(if no, explain in Re	marks.)	
Are Vegetation	No,Soil	No ,or Hydrolo	gy No signi	ificantly disturbed?	Are "Normal C	ircumstances" prese	nt? Yes	X No
Are Vegetation	No,Soil	No ,or Hydrolo	gy <u>No</u> natu	rally problematic?	(If ne	eeded, explain any a	inswers in Ren	narks.)
SUMMARY OF F	INDINGS -	- Attach site m	nap showing s	sampling poir	nt locations	, transects, im	portant fe	atures, etc.
						•	<u> </u>	
Hydrophytic Vegetation	n Present?	Yes	No X					
Hydric Soil Present?	III IOSCIII:	Yes	No X		oled Area			
Wetland Hydrology Pi	esent?	Yes	No X	within a We		Yes	No	X
l volana riyan ologji ri				-				
Remarks:								
This point was de	ermined not to	be within a wetland	d due to the lack of	f all three wetland c	riteria			
This point was de	emined not to	be willin a welland	d due to the lack of	all tillee wetland c	ileria.			
HYDROLOGY								
Wetland hydrolo	-					Secondary Indicato	•	f two required)
		one is required; che				Surface Soil	, ,	
Surface Wa	. ,	_	Aquatic Faun	, ,			-	ve Surface (B8)
High Water		_		s (B15) (LRR U)		Drainage Pat		
Saturation (•	_		lfide Odor (C1)		Moss Trim Li	, ,	
Water Mark	, ,	_	Oxidized Rhiz	zospheres on Living	, Roots(C3)		Water Table (0	J2)
Sediment D	eposits (B2)	_	Presence of F	Reduced Iron (C4)		Crayfish Burr	ows (C8)	
Drift Depos	ts (B3)	_	Recent Iron R	Reduction in Tilled S	3oils (C6)	Saturation Vi	sible on Aerial	Imagery (C9)
Algal Mat o	Crust (B4)	_	Thin Muck Su	urface (C7)		Geomorphic	Position (D2)	
Iron Deposi	is (B5)	_	Other (Explain	n in Remarks)		Shallow Aqui	itard (D3)	
Inundation '	/isible on Aeria	al Imagery (B7)				FAC-Neutral	Test (D5)	
Water-Stair	ed Leaves (B9	9)				Sphagnum m	noss (D8) (LRF	R T, U)
5 11101 #								
Field Observations:	.0 \		5 " " 1					
Surface Water Preser			Depth (inch	· ——				
Water Table Present?	· · · · · · · · · · · · · · · · · · ·		Depth (inch	·	Made addition		W	N. V
Saturation Present? (includes capillary frin	Yes ge)	No X	Depth (Inch	nes): >20	wetiand Hyd	rology Present?	Yes	NoX
` ' '	<u> </u>	n gauge, monitoring	well aerial photos	nrevious inspectio	_l ns) if available:			
Bosonibo recordo	a Bata (otroan	r gaago, momoning	Woll, donal priotoc	, providuo mopostic	no,, ii availabio.			
Remarks:								
No positive indica	ion of wetland	hydrology was obs	erved.					

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft \	% cover	Species?	Status	Number of Dominant Species	
1 Name Observed		70 COVE	Оресіез:	Otatus	·	
					That Are OBL, FACW, or FAC: (A	٦)
2						
3					Total Number of Dominant	
4					Species Across All Strata: 0 (E	3)
5						
6					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC: (A	√B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1 Nana Observed					Total % Cover of: Multiply by:	
2.					OBL species 0 x 1 = 0	_
					FACW species	_
3						_
4						_
5					FACU species 0 x 4 = 0	_
6					UPL species 0 x 5 = 0	_
			= Total Cover		Column Totals: 0 (A) 0	_ (B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = N/A	_
1. None Observed						
2.	_				Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
					2 - Dominance Test is >50%	
4					3 - Prevalence Index is ≤ 3.0 ¹	
5.					Problematic Hydrophytic Vegetation ¹ (Explain)	
6					Problematic Hydrophytic Vegetation (Explain)	
			= Total Cover		4	
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
1. None Observed					Definitions of Five Vegetation Strata:	
2					Tree - Woody plants, excluding woody vines,	
3					approximately 20 ft (6m) or more in height and 3 in.	
4.			· · · · · · · · · · · · · · · · · · ·	-	(7.6 cm) or larger in diameter at breast height (DBH).	
5.						
6.					Sapling - Woody plants, excluding woody vines,	
			-		approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8						
9					Shrub - Woody plants, excluding woody vines,	
10					approximately 3 to 20 ft (1 to 6 m) in height.	
11						
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:	30 ft)				herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2					3 ft (1 m) in height.	
3.						
4.	-				Woody vine - All woody vines, regardless of height.	
5.	•					
o		0	= Total Cover		Hydrophytic	
	50% of total cover:		20% of total cover:	0	Vegetation	
	50% of total cover.		20% of total cover.		-	
					Present? Yes NoX	
Remarks: (if observed, list m	orphological adaptat	ions below).			
No positive indication of hydro	phytic vegetation wa	as observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).	
peeinte maieanen et ilyan	prijus regetation in		a (=0070 0. aona	. 0000.00	5.50 45 1716 5. 4.151).	
No vogetation present						
No vegetation present.						

Profile Desc i Depth	Matrix			Redox	Features			
inches)_	Color (moist)	%	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks
0-20	10YR 5/1	100	None	_			Sandy Loam	
								
								
Type: C=Co	oncentration, D=Dep	letion, RM=	Reduced Matrix,	MS=Maske	ed Sand Grains.	² Location: P	L=Pore Lining, M=Matr	ix.
lydric Soils	Indicators: (Appl	icable to al	I LRRs, unless o	therwise i	noted.)			lematic Hydric Soils ³ :
Histosol	(A1)		Polyv	alue Below	Surface (S8) (L	.RR S, T, U)	1 cm Muck (A9)	(LRR O)
Histic Ep	pipedon (A2)		Thin [Dark Surfac	ce (S9) (LRR S,	T, U)	2 cm Muck (A1	0) (LRR S)
Black Hi	istic (A3)		Loam	y Mucky M	ineral (F1) (LRF	R O)	Reduced Vertic	(F18) (outside MLRA 150A
 Hydroge	en Sulfide (A4)		 Loam	y Gleyed M	latrix (F2)		Piedmont Flood	lplain Soils (F19) (LRR P, S,
Stratified	d Layers (A5)		 Deple	ted Matrix	(F3)		Anomalous Brig	ht Loamy Soils (F20)
Organic	Bodies (A6) (LRR	P, T, U)	Redo	c Dark Surf	face (F6)		(MLRA 153B)	
 5 cm Μι	ucky Mineral (A7) (L	.RR P, T, U)			urface (F7)		Red Parent Ma	terial (TF2)
Muck Pr	resence (A8) (LRR	U)	Redo:	c Depression	ons (F8)			ark Surface (TF12)
1 cm Mı	uck (A9) (LRR P, T)			F10) (LRR			Other (Explain i	n Remarks)
Depleted	d Below Dark Surfa	ce (A11)	Deple	ted Ochric	(F11) (MLRA 1	51)		
Thick Da	ark Surface (A12)		Iron-N	langanese	Masses (F12)	(LRR O, P, T)		hydrophytic vegetation and
Coast P	rairie Redox (A16) (MLRA 150	A) Umbr	c Surface	(F13) (LRR P, 1	', U)		ology must be present,
Sandy M	Mucky Mineral (S1)	(LRR O, S)	Delta	Ochric (F1	7) (MLRA 151)		uniess distur	bed or problematic.
Sandy G	Gleyed Matrix (S4)		Redu	ced Vertic ((F18) (MLRA 1 5	0A, 150B)		
Sandy R	Redox (S5)		Piedn	ont Floodp	olain Soils (F19)	(MLRA 149A)		
Stripped						COO) (MIL DA 440	A 152C 152D)	
	d Matrix (S6)		Anom	alous Brigh	nt Loamy Soils (F2U) (WILKA 143	A, 193C, 193D)	
Dark Su	I Matrix (S6) Irface (S7) (LRR P, Layer (if observed)		Anom	alous Brigh	t Loamy Soils (F20) (MLRA 14:	А, 1930, 1930)	
Dark Su	arface (S7) (LRR P,	:	Anom	alous Brigh	nt Loamy Soils (Soil Present? Yes	No X
Dark Su Restrictive L Type: Depth (inc	arface (S7) (LRR P,	:		alous Brigh	nt Loamy Soils (No X
Dark Su Restrictive L Type: Depth (inc	arface (S7) (LRR P,	:		alous Brigh	nt Loamy Soils (No X
Dark Su Restrictive L Type: Depth (inc	arface (S7) (LRR P,	:		alous Brigh	nt Loamy Soils (No <u>X</u>
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		alous Brigh	nt Loamy Soils (No X
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		alous Brigh	nt Loamy Soils (NoX
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		alous Brigh	nt Loamy Soils (No X
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		alous Brigh	nt Loamy Soils (No X
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		alous Brigh	nt Loamy Soils (NoX
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		alous Brigh	nt Loamy Soils (No X
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		alous Brigh	nt Loamy Soils (NoX
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		alous Brigh	nt Loamy Soils (No X
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		alous Brigh	nt Loamy Soils (No X
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		alous Brigh	nt Loamy Soils (No X
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		alous Brigh	nt Loamy Soils (No X
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		alous Brigh	nt Loamy Soils (No X
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		alous Brigh	nt Loamy Soils (No X
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		alous Brigh	nt Loamy Soils (NoX
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		alous Brigh	nt Loamy Soils (NoX
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		alous Brigh	nt Loamy Soils (No X
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		alous Brigh	nt Loamy Soils (No X
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		alous Brigh	nt Loamy Soils (No X
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		alous Brigh	nt Loamy Soils (No X
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		alous Brigh	nt Loamy Soils (No X
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		alous Brigh	nt Loamy Soils (No X

Project/Site:	Bluewater SPM	Cou	unty:	Nueces	Sampl	ing Date:	February 5, 2019
Applicant/Owner:	Lloyd Engineeri	ng	State	e:	Texas Samp	le Point:	DPB043_U
Investigator(s): C.	Bailey and N	I. Trivino Se	ction, Township	, Range:		N/A	
Landform (hillslope, terrace, etc		Loc	cal relief (conca	ve, convex, n	one): None	Slope (%)	:0-5
Subregion (LRR or MLRA): _	None		Lat:27.86	8371 L	.ong:97.085	5511 Datur	n: North American Datum 1983
Soil Map Unit Name:		loam, rarely flood			_ NWI Classificati	on:	E2USN
Are climatic / hydrologic condition	ons on the site typical for this ti				_(if no, explain in	,	
Are Vegetation No,			-		Circumstances" pr	_	
Are Vegetation No,	Soil No ,or Hydrology _	No naturally p	problematic?	(If ı	needed, explain ar	y answers in Re	emarks.)
SUMMARY OF FINDIN	GS - Attach site map	showing sam	npling point	locations	s, transects, i	mportant fo	eatures, etc.
Hydrophytic Vegetation Prese	nt? Yes	No <u>X</u>					
Hydric Soil Present?		No X	Is the Sampl	ed Area			
Wetland Hydrology Present?		No X	within a Wet		Yes	No	x
, ,							
Remarks:							ļ
This	Local Action 200 Service and a service design	4 - 41 - 1 - 1 - 2 - 11 41					
I his point was determined	I not to be within a wetland due	to the lack of all th	rree wetland cri	eria.			
HYDROLOGY							
Wetland hydrology India	ators:				Secondary Indic	ators (minimum	of two required)
Primary Indicators (minimu	um of one is required; check all	that apply)			Surface S	oil Cracks (B6)	
Surface Water (A1)		Aquatic Fauna (B1	13)		Sparsely \	Vegetated Conc	ave Surface (B8)
High Water Table (A	42)	Marl Deposits (B1	5) (LRR U)		Drainage	Patterns (B10)	
Saturation (A3)		Hydrogen Sulfide	Odor (C1)		Moss Trin	n Lines (B16)	
Water Marks (B1)		Oxidized Rhizosph	neres on Living	Roots(C3)	Dry-Seaso	on Water Table	(C2)
Sediment Deposits	(B2)	Presence of Redu	ced Iron (C4)		Crayfish E	Burrows (C8)	
Drift Deposits (B3)		Recent Iron Reduc	ction in Tilled So	oils (C6)	Saturation	Visible on Aeri	al Imagery (C9)
Algal Mat or Crust (B4)	Thin Muck Surface	e (C7)		Geomorph	nic Position (D2)	
Iron Deposits (B5)		Other (Explain in F	Remarks)		Shallow A	quitard (D3)	
Inundation Visible o	n Aerial Imagery (B7)				FAC-Neut	ral Test (D5)	
Water-Stained Leav	/es (B9)				Sphagnur	n moss (D8) (LF	RR T, U)
Field Observations:							
Surface Water Present?	Yes NoX	Depth (inches):	N/A				
Water Table Present?	Yes NoX	Depth (inches):	>20				
	Yes NoX	Depth (inches):	>20	Wetland Hy	drology Present?	Yes	NoX
(includes capillary fringe)							
Describe Recorded Data (stream gauge, monitoring well,	aerial photos, prev	vious inspection	s), if available	: :		
Remarks:							
No positive indication of w	etland hydrology was observed						
No positive indication of w	eliand flydrology was observed						

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
To a Object way (District	00 (1)					
Tree Stratum (Plot size:	<u>30 ft.</u>)	% cover	Species?	Status	Number of Dominant Species	
					That Are OBL, FACW, or FAC:	(A)
2						
3			. <u> </u>		Total Number of Dominant	
4					Species Across All Strata: 0	(B)
5						
6.					Percent of Dominant Species	
			= Total Cover		•	(A/B)
	50% of total cover:		20% of total cover:	0		(,,,,,
Conling Stratum (Diet size)			20% of total cover.		Prevalence Index Worksheet:	
Sapling Stratum (Plot size:	30 ft.)					
1. None Observed					Total % Cover of: Multiply by:	_
2					OBL species 0 x 1 = 0	_
3					FACW species 0 x 2 = 0	_
4					FAC species 0 x 3 = 0	
5					FACU species 0 x 4 = 0	
6			<u> </u>		UPL species 0 x 5 = 0	
		0	= Total Cover		Column Totals: 0 (A) 0	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:			•		Prevalence Index = B/A = N/A	
	,					_
_					Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
4					2 - Dominance Test is >50%	
5					3 - Prevalence Index is ≤ 3.0 ¹	
6					Problematic Hydrophytic Vegetation ¹ (Explain)	
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
1. None Observed					Definitions of Five Vegetation Strata:	
2					Tree - Woody plants, excluding woody vines,	
3.			·		approximately 20 ft (6m) or more in height and 3 in.	
4.					(7.6 cm) or larger in diameter at breast height (DBH).	
				-	(1.10 d.1.) or larger in alameter at 2.10det 110.gm (22.1.).	
5					Sapling - Woody plants, excluding woody vines,	
6				-	approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8.					than 3 in. (7.0 cm) DDH.	
9					Charle Manda alama arrabadian manda di man	
10					Shrub - Woody plants, excluding woody vines,	
11					approximately 3 to 20 ft (1 to 6 m) in height.	
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:	30 ft.)				herbaceous vines, regardless of size, <u>and</u> woody	
1. None Observed			<u> </u>		plants, except woody vines, less than approximately	
2					3 ft (1 m) in height.	
3.						
4.					Woody vine - All woody vines, regardless of height.	
5.						j
		0	= Total Cover	-	Hydrophytic	
	50% of total cover:		20% of total cover:	0	Vegetation	
	30 % Of total cover.		2070 Of total cover.		_	
					Present? Yes NoX	
5			.			
Remarks: (if observed, list mo	orphological adaptat	ions below).			
No positive indication of hydro	phytic vegetation wa	as observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).	
•				•		
No vegetation present.						
G						

epth	Matrix			Redox F					
nches)	Color (moist)	%	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks	
0-20	10YR_5/1_	100	None				Sandy Loam		
					-				
					-				
						21			
-	oncentration, D=De					Location: P	L=Pore Lining, M=Matrix	c. ematic Hydric Soils ³ :	
•	Indicators: (App	licable to al	•		•	DD C T III			
Histoso	` '				Surface (S8) (L l e (S9) (LRR S, '		1 cm Muck (A9)		
	pipedon (A2) listic (A3)				e (39) (LRR 3, neral (F1) (LRR	· · · ·	2 cm Muck (A10	(F18) (outside MLRA 150A, E	
	en Sulfide (A4)			Gleyed Ma	, , ,	0)		plain Soils (F19) (LRR P, S, T	
	d Layers (A5)			ed Matrix (nt Loamy Soils (F20)	
	Bodies (A6) (LRR	P T III		Dark Surfa	•		(MLRA 153B)	it Loanly Solis (1 20)	
	ucky Mineral (A7) (I				urface (F7)		Red Parent Mate	erial (TF2)	
	resence (A8) (LRR			Depressio	, ,			ark Surface (TF12)	
	uck (A9) (LRR P, T			10) (LRR	` '		Other (Explain in Remarks)		
	d Below Dark Surfa				(F11) (MLRA 15	31)	0 (2xp.a	. r.o.na.no,	
	ark Surface (A12)	()			Masses (F12) (-	³ Indicators of	hydrophytic vegetation and	
	Prairie Redox (A16)	(MLRA 150		-	F13) (LRR P, T ,	· · · · · · · · · ·	,	logy must be present,	
	Mucky Mineral (S1)	-		•) (MLRA 151)	,	unless disturb	ed or problematic.	
Sandy (Gleyed Matrix (S4)			•	-18) (MLRA 15 0	OA, 150B)			
	Redox (S5)		Piedmo	ont Floodpl	ain Soils (F19)	(MLRA 149A)			
Strippe	d Matrix (S6)		Anoma	llous Brigh	t Loamy Soils (F	20) (MLRA 14	9A, 153C, 153D)		
Dark Si	urface (S7) (LRR P,	S, T, U)							
estrictive	Layer (if observed)):							
Type:									
Depth (in	ches):					Hydri	c Soil Present? Yes	No X	
							_		
lemarks:						-			
lo nositive i	ndication of hydric s	oile was obs	enved						
io positivo i	naioation of flyano s	ons was obt	orved.						

Project/Site:	Bluewater SPM	Co	unty:	Nueces	Sa	ampling Date:	February 5, 2019
Applicant/Owner:	Lloyd Engineer		State			_	DPB044 PSS
• •			ction, Township			 N/A	
Landform (hillslope, terrace, etc.		ter Lo	cal relief (conca	ve, convex, no	ne): No	one Slope	e (%): 0-5
Subregion (LRR or MLRA):							Datum: North American Datum 1983
Soil Map Unit Name:		y loam, rarely flood				ication:	E2USN
Are climatic / hydrologic condition	ons on the site typical for this	ime of year? (Y	res / No)	YES			
Are Vegetation No ,S	Soil No ,or Hydrology	No significar	ntly disturbed?	Are "Normal C	- Circumstances	s" present? Ye	es X No
Are Vegetation No ,S	Soil No , or Hydrology	No naturally	problematic?	(If n	eeded, explai	n any answers	in Remarks.)
SUMMARY OF FINDING	GS - Attach site man	showing san	anlina noin	locations	transoct	e imnortar	nt features etc
COMMITTEE OF THE DITT		Jilowing Juli	ipinig poni	locations	, transco	.s, importar	it ioutures, etc.
Hydrophytic Vegetation Preser	nt? Yes X	No					
Hydric Soil Present?	YesX	No	Is the Sampl	ed Area			
Wetland Hydrology Present?	YesX	No	within a Wet	land?	Yes _	<u> </u>	lo
·	to be within a wetland due to	the presence of all	3 wetland criter	ia.			
HYDROLOGY							
Wetland hydrology Indica							num of two required)
	m of one is required; check a					ce Soil Cracks (
Surface Water (A1)		Aquatic Fauna (B					Concave Surface (B8)
High Water Table (A		Marl Deposits (B1				age Patterns (B	•
X Saturation (A3)		Hydrogen Sulfide	, ,	Dooto(C2)		Trim Lines (B16	*
Water Marks (B1)		Oxidized Rhizospl	-	(C3)		eason Water Ta	, ,
Sediment Deposits (Drift Deposits (B3)	B2)	Presence of Redu Recent Iron Redu		ile (C6)		sh Burrows (C8	Aerial Imagery (C9)
Algal Mat or Crust (E		Thin Muck Surface		ilis (CO)		norphic Position	, ,
Iron Deposits (B5)		Other (Explain in I				ow Aquitard (D3	, ,
Inundation Visible or	Δerial Imagery (B7)	Otilei (Explain in i	ixemarks)			พ Aquitaru (D3 Neutral Test (Dถ	,
Water-Stained Leave						gnum moss (D8	*
Water-Stained Leave	C3 (D3)				Opila	gridini moss (Do	(LIKIC 1, O)
Field Observations:							
Surface Water Present? Y	es NoX	Depth (inches):	N/A				
	es No X	Depth (inches):					
Saturation Present? Y	es X No	Depth (inches):	0	Wetland Hyd	Irology Pres	ent? Yes	X No
(includes capillary fringe)							
Describe Recorded Data (s	stream gauge, monitoring well	, aerial photos, pre	vious inspection	s), if available:			
Remarks:							
A tab to the	land barbatan aras a barbara	/					
A positive indication of wet	land hydrology was observed	(at least one prima	ary indicator).				

Sampling Point: DPB044_PSS

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft.)	% cover	Species?	Status	Number of Dominant Species	
	,				That Are OBL, FACW, or FAC:	(A)
2.						`
3.					Total Number of Dominant	
4.					Species Across All Strata: 1 (В)
5.						`
6.		-			Percent of Dominant Species	
		0	= Total Cover		·	A/B)
	50% of total cover:		20% of total cover:	0		·
Sapling Stratum (Plot size:			, —		Prevalence Index Worksheet:	
1 Name Observed					Total % Cover of: Multiply by:	i
2.					OBL species 100 x 1 = 100	_
					FACW species 0 x 2 = 0	_
3					FAC species 0 x3 = 0	-
4					FACU species 0 x 4 = 0	-
5					UPL species 0 x 5 = 0	-
6	-		= Total Cover			— _(B)
	50% of total cover			0	Column Totals: (A) (A)	— ^(B)
Shrub Stratum (Plot size:	50% of total cover:	U	20% of total cover:		Prevalence Index = B/A = 1.00	
		400	V	ODI	Prevalence Index = B/A = 1.00	-
		100		OBL_	Liudrophytic Vonetation in dioase	
2.					Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
4					X 2 - Dominance Test is >50%	
5					X 3 - Prevalence Index is ≤ 3.0 ¹	
6					Problematic Hydrophytic Vegetation ¹ (Explain)	
		100	= Total Cover			
	50% of total cover:	50	20% of total cover:	20	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
1. None Observed					Definitions of Five Vegetation Strata:	
2					Tree - Woody plants, excluding woody vines,	
3					approximately 20 ft (6m) or more in height and 3 in.	
4					(7.6 cm) or larger in diameter at breast height (DBH).	
5						
6					Sapling - Woody plants, excluding woody vines,	
7					approximately 20 ft (6 m) or more in height and less	
8.					than 3 in. (7.6 cm) DBH.	
9.						
10.					Shrub - Woody plants, excluding woody vines,	
11.					approximately 3 to 20 ft (1 to 6 m) in height.	
		0	= Total Cover			
	50% of total cover:	0		0	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:					herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2.					3 ft (1 m) in height.	
3					Woody vine - All woody vines, regardless of height.	
4					, , ,	i
5			= Total Cover		Hydrophytic	
	50% of total cover:		•	0		
	50 /0 OI LOLAI COVET:		20% of total cover:	0	Vegetation	
					Present?	
Daniel Chalanna I Estad		1 1	<u> </u>			
Remarks: (if observed, list m	orphological adaptati	ons below).			
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	species index	ed as OBL, FACW, or FAC).	
A positive indication of hydrop	hytic vegetation was	observed	(Prevalence Index is	s ≤ 3.00).		
	-			•		

epth	Matrix			Redox F	eatures			
nches)	Color (moist)	<u>%</u>	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks
0-3	2.5Y 5/1	100	None				Sandy Loam	
3-20	N 4	98_	10YR 5/4	_2_	C	PL	Sandy Loam	
 Гуре: C=C	oncentration, D=De		Reduced Matrix. N	MS=Maske	d Sand Grains.	² Location: P	L=Pore Lining, M=Matrix	<u> </u>
	Indicators: (Appl	•						ematic Hydric Soils ³ :
Histoso					Surface (S8) (L	.RR S. T. U)	1 cm Muck (A9)	-
	pipedon (A2)				e (S9) (LRR S ,	· · · · · · · ·	2 cm Muck (A10	(LRR S)
	listic (A3)				neral (F1) (LRF	· ·		(F18) (outside MLRA 150A, E
	en Sulfide (A4)			Gleyed Ma	, , ,	,		plain Soils (F19) (LRR P, S, T
	ed Layers (A5)			ed Matrix (nt Loamy Soils (F20)
	Bodies (A6) (LRR	P T II)		Dark Surfa	•		(MLRA 153B)	it Louiny Collo (1 Lo)
·	ucky Mineral (A7) (L				urface (F7)		Red Parent Mate	erial (TF2)
	resence (A8) (LRR	· · · · · ·		Depressio	` '			rk Surface (TF12)
	uck (A9) (LRR P, T)	•		10) (LRR			Other (Explain in	, ,
	ed Below Dark Surfa				(F11) (MLRA 1 :	51)	Other (Explain III	i Koniaika)
	ed Below Dark Suria Park Surface (A12)	OG (A11)			(F11) (MLRA 1 : Masses (F12)	•	³ Indicators of I	hydrophytic vegetation and
		/MI DA 450A		-				logy must be present,
-	Prairie Redox (A16)	•		,	F13) (LRR P, T	, 5)		ed or problematic.
	Mucky Mineral (S1)	(LRK U, 3)		•	7) (MLRA 151) =19) (MLBA 15	0A 150D\		
	Gleyed Matrix (S4)				F18) (MLRA 15 Ioin Soile (E10)	· ·		
	Redox (S5)				lain Soils (F19)	-	DA 452C 452D\	
	d Matrix (S6) urface (S7) (LRR P,		Anoma	iious Brigh	ι Loamy Solls (-∠∪) (MLRA 14 9	9A, 153C, 153D)	
Depth (in	,						_	XNo
emarks:	dication of hydric so	il was observe	ed.					

Project/Site:	Bluewater SPM	Co	ounty:	Nueces		Sampling Da	nte: Fe	bruary 5, 2019
Applicant/Owner:	Lloyd Enginee		Stat		Texas			PB045 PEM
			ection, Township			- ·	N/A	
Landform (hillslope, terrace, etc.):		ater L	ocal relief (conca	ive, convex, r	none):	None	Slope (%):	0-5
Subregion (LRR or MLRA):							Datum:	North American Datum 1983
Soil Map Unit Name:		ay loam, rarely floo	_			ssification:		N/A
Are climatic / hydrologic conditions	s on the site typical for this	time of year? (Yes / No)	YES		plain in Rema		
Are VegetationNo,So	il No ,or Hydrology	No significa	ntly disturbed?	Are "Normal	Circumstan	ces" present?	Yes	X No
Are Vegetation No ,So	il No ,or Hydrology	No naturally	/ problematic?	(If	needed, ex	plain any ansv	wers in Rem	arks.)
SUMMARY OF FINDING	S - Attach site man	showing sa	mnlina noin	t location	e trance	acts imno	rtant fos	ituras atc
	——————————————————————————————————————	Jilowing Sui	iipiiiig poiii	· iocation	o, transc	, mipc	Ttailt ioc	
Hydrophytic Vegetation Present?		No						
Hydric Soil Present?	YesX	No	Is the Samp	led Area				
Wetland Hydrology Present?	YesX	No	within a We	tland?	Yes	<u> </u>	No	
Remarks: This point was determined to	be within a wetland due to	the presence of a	ll 3 wetland crite	ria.				
HYDROLOGY								
Wetland hydrology Indicate	ors:				Seconda	ry Indicators (minimum of	two required)
Primary Indicators (minimum	of one is required; check a	ll that apply)				ırface Soil Cra	, ,	
Surface Water (A1)		Aquatic Fauna (E	•					e Surface (B8)
	High Water Table (A2) Marl Depos					ainage Patter		
X Saturation (A3)		Hydrogen Sulfide				oss Trim Lines	, ,	
Water Marks (B1)		Oxidized Rhizosp	_	Roots(C3)		y-Season Wa	•	2)
Sediment Deposits (B2		Presence of Red		.: (00)		ayfish Burrow		(00)
Drift Deposits (B3)		Recent Iron Red		oils (C6)		turation Visib		Imagery (C9)
Algal Mat or Crust (B4)		Thin Muck Surface	, ,			eomorphic Pos		
Iron Deposits (B5)		Other (Explain in	Remarks)			allow Aquitar		
Inundation Visible on A						C-Neutral Te		
Water-Stained Leaves	(B9)				Sp	hagnum mos	s (D8) (LRR	i, u)
Field Observations:								
	s NoX	Depth (inches)	: N/A					
	No X	Depth (inches)	·					
	X No	Depth (inches)		Wetland H	vdrology Pr	resent? Ye	es X	No
(includes capillary fringe)		. ,		-				
Describe Recorded Data (str	eam gauge, monitoring well	l, aerial photos, pro	evious inspectior	ns), if availabl	e:			
Remarks:								
Remarks.								
A positive indication of wetlar	nd hydrology was observed	(at least one prim	ary indicator).					
Aquatic Fauna: crabs.								

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft.)	% cover	Species?	Status	Number of Dominant Species	
1 Name Observed	,				That Are OBL, FACW, or FAC:	(A)
2.						
3.					Total Number of Dominant	
4					Species Across All Strata: 2	(B)
5						
6					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC:	(A/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1. None Observed					Total % Cover of: Multiply by:	
2					OBL species x 1 = 190	
3					FACW species 0 x 2 = 0	
4					FAC species 0 x 3 = 0	
5					FACU species 0 x 4 = 0	
6					UPL species 0 x 5 = 0	
		0	= Total Cover		Column Totals:190 (A)190	(B)
	50% of total cover:	0	20% of total cover:	00		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A =1.00	
2.					Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
4.					X 2 - Dominance Test is >50%	
5.					X 3 - Prevalence Index is $\leq 3.0^{1}$	
6.			·		Problematic Hydrophytic Vegetation ¹ (Explain)	
·			= Total Cover		(
	50% of total cover:		20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
1. Salicornia depressa		80	Yes	OBL	Definitions of Five Vegetation Strata:	
2. Avicennia germinans		100	Yes	OBL	Tree - Woody plants, excluding woody vines,	
3. Salicornia bigelovii		10	No	OBL	approximately 20 ft (6m) or more in height and 3 in.	
4.			·		(7.6 cm) or larger in diameter at breast height (DBH).	
5.						
6.					Sapling - Woody plants, excluding woody vines,	
7.					approximately 20 ft (6 m) or more in height and less	
8.					than 3 in. (7.6 cm) DBH.	
9.			· · · · · · · · · · · · · · · · · · ·			
10.			·		Shrub - Woody plants, excluding woody vines,	
11.			·		approximately 3 to 20 ft (1 to 6 m) in height.	
		190	= Total Cover			
	50% of total cover:	95	20% of total cover:	38	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:	30 ft.)				herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2.					3 ft (1 m) in height.	
3.						
4.	<u> </u>				Woody vine - All woody vines, regardless of height.	
5.						
		0	= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes X No	
Remarks: (if observed, list mo						
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	species index	ted as OBL, FACW, or FAC).	
A positive indication of hydrop	hytic vegetation was	observed	(Prevalence Index is	s ≤ 3.00).		

Depth	Matrix			Redox F	eatures						
inches)	Color (moist)	_%_	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks			
0-3	2.5Y 5/1	100	None				Sandy Loam				
3-20	N 4	98	10YR 5/4		C	PL	Sandy Loam				
		<u> </u>									
Type: C=C	Concentration, D=De	pletion, RM	l=Reduced Matrix, M	IS=Masked	Sand Grains.	² Location: P	L=Pore Lining, M=Matrix	<u>.</u> ζ.			
Hydric Soil	s Indicators: (Appl	icable to a	all LRRs, unless ot	herwise no	oted.)		Indicators for Proble	ematic Hydric Soils ³ :			
Histoso	ol (A1)		Polyval	ue Below S	Surface (S8) (L	RR S, T, U)	1 cm Muck (A9)	(LRR O)			
Histic E	Epipedon (A2)		Thin Da	ark Surface	(S9) (LRR S,	T, U)	2 cm Muck (A10) (LRR S)			
Black Histic (A3) Loamy Mucky Mineral (F1) (LRR							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) Depleted Matrix (F3)							Anomalous Bright Loamy Soils (F20)				
Organi	c Bodies (A6) (LRR	P, T, U)	Redox	Dark Surfa		(MLRA 153B)					
	5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7)						Red Parent Mate	erial (TF2)			
Muck F	uck Presence (A8) (LRR U) Redox Depressions (F8)						Very Shallow Da	rk Surface (TF12)			
1 cm M	Muck (A9) (LRR P, T) Marl (F10) (LRR U)						Other (Explain in	n Remarks)			
Deplet	ed Below Dark Surfa	ice (A11)	Deplete	ed Ochric (I	=11) (MLRA 1	51)	2				
	Dark Surface (A12)			•	lasses (F12)	, , ,		hydrophytic vegetation and			
	Prairie Redox (A16)		· —	•	13) (LRR P, T	, U)	wetland hydrology must be present, unless disturbed or problematic.				
Sandy	Mucky Mineral (S1)	(LRR O, S		` '	(MLRA 151)		·				
	Gleyed Matrix (S4)			,	18) (MLRA 15	•					
X Sandy	Redox (S5)			•	, ,	(MLRA 149A)					
	ed Matrix (S6)		Anoma	lous Bright	Loamy Soils (=20) (MLRA 14 9	9A, 153C, 153D)				
Dark S	urface (S7) (LRR P,	S, T, U)									
Restrictive	Layer (if observed)):									
Type:											
Depth (ir	nches):					Hydrid	Soil Present? Yes _	No			
Remarks:											
A		:1									
A positive in	idication of hydric so	ii was obse	ervea.								

Project/Site:	Bluewater SPM	County	y: Nuece	es S	Sampling Date:	February 5, 2019
Applicant/Owner:	Lloyd Engineerin		State:		Sample Point:	
• • • • • • • • • • • • • • • • • • • •	Bailey and N.	Trivino Sectio	on, Township, Range:		N/A	
Landform (hillslope, terrace, et		r Local	relief (concave, convex	x, none):	lone Slope (%): 0-5
	None		at: 27.872426	· ·	7.090045 Da	tum: North American Datum 1983
Soil Map Unit Name:		loam, rarely flooded	•	NWI Class	ification:	N/A
Are climatic / hydrologic condit	tions on the site typical for this tin	ne of year? (Yes	/ No) YES	(if no, expl	ain in Remarks.)	
Are Vegetation No	,Soil No, or Hydrology	No significantly	disturbed? Are "Norn	nal Circumstance	es" present? Yes	X No
Are Vegetation No	,Soil No ,or Hydrology	No naturally pro	blematic?	(If needed, explain	ain any answers in	Remarks.)
SUMMARY OF FINDIN	NGS - Attach site map s	howing sampl	ing point location	ons. transec	ts. important	features, etc.
		J - 1	31.	,	,	
Hydrophytic Vegetation Prese	ent? Yes X N	°				
Hydric Soil Present?			s the Sampled Area	V	V N.	
Wetland Hydrology Present?	YesX N	o v	vithin a Wetland?	Yes_	X No	
Remarks:						
·	d to be within a wetland due to th	e presence of all 3 w	vetland criteria.			
HYDROLOGY						
Wetland hydrology Indi					Indicators (minimu	
	num of one is required; check all t				ace Soil Cracks (B6	
Surface Water (A1)		Aquatic Fauna (B13)			, ,	ncave Surface (B8)
High Water Table (Marl Deposits (B15) (nage Patterns (B10)
X Saturation (A3)		Hydrogen Sulfide Odd	, ,		s Trim Lines (B16)	I- (CO)
Water Marks (B1)		•	es on Living Roots(C3)		Season Water Tab	le (G2)
Sediment Deposits	· · · —	Presence of Reduced	, ,		fish Burrows (C8)	orial Imagany (CO)
Drift Deposits (B3) Algal Mat or Crust		hin Muck Surface (C	n in Tilled Soils (C6)		ration Visible on Ae morphic Position (E	, ,
Iron Deposits (B5)	· · —	Other (Explain in Ren	•		low Aquitard (D3)	72)
	on Aerial Imagery (B7)	otilei (Explaiii iii Neii	narks)		-Neutral Test (D5)	
Water-Stained Lea	- · · ·				agnum moss (D8) (I PP T II\
Water-Stained Lea	ves (D3)				agnum moss (Do) (LKK 1, 0)
Field Observations:						
Surface Water Present?	Yes NoX	Depth (inches):	N/A			
	Yes No X	Depth (inches):	>20			
Saturation Present?	Yes X No	Depth (inches):	2 Wetland	Hydrology Pres	sent? Yes	X No
(includes capillary fringe)						
Describe Recorded Data	(stream gauge, monitoring well, a	aerial photos, previou	us inspections), if availa	able:		
Remarks:						
A positive indication of we	etland hydrology was observed (a	at least one primary i	ndicator).			
Aquatic Fauna: crabs.						

Sampling Point: DPB046_PSS

Number of Dominant Species Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)			Absolute	Dominant	Indicator	Dominance Test worksheet:	
None Observed	Tree Stratum (Plot size:	30 ft)				Number of Dominant Species	
2 Total Number of Dominiant Species Across All Strata: 3 (B) 5 Solid Cover O	1 Name Observed		70 0010.	<u> </u>	- Claras	·	4)
Total Number of Dominant Species Species Access All Stratats Species Access Access All Stratats Species Access Access All Stratats Species Access						That the OBE, I NOW, OI I NO.	')
Species Across All Stratus 3 (B)						Total Number of Deminant	
Percent of Dominant Species							٥١
Percent of Dominant Species Prevalence Index Worksheet: That Air co Bis, FACW, or FAC: 100% (AB)						Species Across Ali Strata.)
That Are OBL_FACW, or FAC: 100% (A/B)							
Saping Stratum (Plot size: 30 ft.) Saping St	6	 .				·	
Name		•				That Are OBL, FACW, or FAC: (A	√B)
Total % Cover of: Multiply by:		50% of total cover:	0	20% of total cover:	0		
2. 3. 3. 3. 4. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5.	Sapling Stratum (Plot size:	30 ft.)				Prevalence index worksneet:	
## A	1. None Observed					Total % Cover of: Multiply by:	_
## A	2					OBL species 130	_
## FAC Species 0 x 3 = 0				·		FACW species x 2 = 40	_
FACU species 0						FAC species 0 x 3 = 0	_
Column Totals: 150						FACU species 0 x 4 = 0	
O = Total Cover						UPL species 0 x 5 = 0	
Shrub Stratum (Plot size: 30 ft.)			0	= Total Cover		Column Totals: 150 (A) 170	— (B)
Shrub Stratum		50% of total cover			0	、,	— ` ´
1. Avicennia germinans	Shrub Stratum (Plot size:			2070 01 10101 00701.		Prevalence Index = B/A = 113	
2 3 3 4 4 5 5 5 5 5 5 5 5		<u> </u>	45	Voc	OBI	1 Tevalence mack - B/TV -	_
1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 2 - Total Cover 50% of total cover: 22.5 20% of total cover: 9 - Herb Stratum (Plot size: 30 ft.) 1 - Salicornia bigelovii 2 - No FACW 3 - FACW 3 - Forevalence Index is \$3.0¹ Problematic Hydrophytic Vegetation 1 (Explain) 1 - Rapid Test for Hydrophytic Vegetation 2 - No FACW 3 - Frevalence Index is \$3.0¹ Problematic Hydrophytic Vegetation 1 (Explain) 1 - Rapid Test for Hydrophytic Vegetation 2 - No FACW 1 - Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 2 - No FACW 3 - FACW 3 - FACW 4 - Distichiis littoralis - Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. 4 - Distichiis littoralis - Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 1 in. 3 - Distichiis littoralis - Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) or larger in diameter at breast height (DBH). 5 - Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) or larger in diameter at breast height (DBH). 5 - Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height			45		OBL	Hydronhytia Vagatation Indicators:	
4. S.							
\$ 3 - Prevalence Index is \$\leq 3.0 \frac{1}{1} \] A							
Problematic Hydrophytic Vegetation (Explain)	4						
Herb Stratum (Plot size: 30 ft.) Salicornia bigelovii 35							
Solition Stratum (Plot size: 30 ft. 1 1 1 1 1 1 1 1 1	6					Problematic Hydrophytic Vegetation (Explain)	
Depresent, unless disturbed or problematic. Definitions of Five Vegetation Strata: Tree - Woody Vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 8 in. (7.6 cm) or larger in diameter at breast height (DBH).			45	= Total Cover			
1. Salicornia bigelovii 35 Yes OBL 2. Lycium carolinianum 20 No FACW 3. Salicornia depressa 10 No OBL 4. Distichilis littoralis 40 Yes OBL 5. Salicornia depressa 10 No OBL 5. Salicornia depressa 40 Yes OBL 6. Sapiroria depressa 40 Yes OBL 7. Sapiroria depressa 40 Yes OBL 8. Sapiroria depressa 40 Yes OBL 8. Sapiroria woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). 8. Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. 8. Shrub - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. 8. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. 8. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. 8. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. 8. Shrub - Woody vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. 8. Shrub - Woody vines, regardless of height. 9. Shrub - Woody vines, regardless of height.		50% of total cover:	22.5	20% of total cover:	9	¹ Indicators of hydric soil and wetland hydrology must	
2 Lycium carolinianum 3. Salicornia depressa 4. Distichilis littoralis 4. Distichilis littoralis 4. Distichilis littoralis 5. Composition depressa 4. Distichilis littoralis 5. Composition depressa 6. Composition depressa 8. Composition depression depre	Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
3. Salicornia depressa 10 No OBL Distichlis littoralis 40 Yes OBL (7.6 cm) or larger in diameter at breast height (DBH). 5.	1. Salicornia bigelovii		35	Yes	OBL	Definitions of Five Vegetation Strata:	
4. Distichlis littoralis 5. 6.	2. Lycium carolinianum		20	No	FACW	Tree - Woody plants, excluding woody vines,	
4. Distichlis littoralis 5. 6.	3. Salicornia depressa		10	No	OBL	approximately 20 ft (6m) or more in height and 3 in.	
Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. None Observed Noody Vine Stratum (Plot size: 30 ft.) None Observed Therb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine - All woody vines, regardless of height. Woody vine - All woody vines, regardless of height. Hydrophytic Vegetation Present? Yes X No							
Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine - All woody vines, regardless of height. Woody vine - All woody vines, regardless of height. Hydrophytic Vegetation Present? Yes X No					OBL	(7.5 only of larger in diameter at broadt height (BBH).	
approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Woody Vine Stratum (Plot size: 30 ft.) None Observed 2.						Sapling - Woody plants, excluding woody vines.	
8							
Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. 105							
Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. 105						than 6 iii. (7.6 din) BBH.	
approximately 3 to 20 ft (1 to 6 m) in height. 105						Charle Woody plants evaluding woody vines	
105	10						
Solid Cover: Soli	11					approximately 5 to 20 ft (1 to 6 m) in neight.	
Moody Vine Stratum (Plot size: 30 ft.) 1. None Observed 2.			105	= Total Cover		1	
1. None Observed 2		50% of total cover:	52.5	20% of total cover:	21	, ,,,	
2	Woody Vine Stratum (Plot size:	30 ft)				<u> </u>	
3	1. None Observed					plants, except woody vines, less than approximately	
3	2.					3 ft (1 m) in height.	
4	·						
5						Woody vine - All woody vines, regardless of height.	
Remarks: (if observed, list morphological adaptations below). Total Cover							
50% of total cover: 0 20% of total cover: 0 Vegetation Present? Yes X No Remarks: (if observed, list morphological adaptations below).	<u></u>			= Total Cover		Hydrophytic	
Present? Yes X No Remarks: (if observed, list morphological adaptations below).		50% of total cover:			0		
Remarks: (if observed, list morphological adaptations below).		50 /0 OI IOIAI COVEI.	U	2070 OI IOIAI COVEI.	<u> </u>		
						Present? Yes X NO	
A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).	Remarks: (if observed, list mo	orphological adaptati	ons below).			
	A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	species index	ked as OBL, FACW, or FAC).	
		-				•	

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Depth	Matrix			Redox F	eatures			
inches)_	Color (moist)	_%_	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks
0-20	10YR 3/2_	95	10YR 3/6	5	C	PL	Sand	
Type: C=Co	oncentration, D=Dep	oletion, RM=	Reduced Matrix, N	/IS=Maske	d Sand Grains.	² Location: P	L=Pore Lining, M=Ma	trix.
lydric Soils	Indicators: (Appl	icable to al	II LRRs, unless ot	herwise n	oted.)		Indicators for Pro	blematic Hydric Soils ³ :
Histosol	(A1)		Polyva	lue Below	Surface (S8) (L	.RR S, T, U)	1 cm Muck (A	9) (LRR O)
Histic E _l	pipedon (A2)		Thin D	ark Surfac	e (S9) (LRR S ,	T, U)	2 cm Muck (A	.10) (LRR S)
Black H	istic (A3)		 Loamy	Mucky Mir	neral (F1) (LRF	(O)	Reduced Ver	ic (F18) (outside MLRA 150A
— Hydroge	en Sulfide (A4)		Loamy	Gleyed Ma	atrix (F2)		Piedmont Flo	odplain Soils (F19) (LRR P, S,
Stratifie	d Layers (A5)		Deplete	ed Matrix (F3)		Anomalous B	right Loamy Soils (F20)
Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6)					(MLRA 153B	, ,		
	ucky Mineral (A7) (L	· · · · ·			urface (F7)		Red Parent M	
	resence (A8) (LRR			Depressio				Dark Surface (TF12)
	uck (A9) (LRR P, T)	•		10) (LRR			Other (Explai	
	d Below Dark Surfa				(F11) (MLRA 1 :	51)		,
	ark Surface (A12)	. ,			Masses (F12)	•	³ Indicators	of hydrophytic vegetation and
Coast Prairie Redox (A16) (MLRA 150A)				-	F13) (LRR P, T			drology must be present,
	/ucky Mineral (S1)) (MLRA 151)	•	unless dist	urbed or problematic.
	Gleyed Matrix (S4)	. , ,		,	F18) (MLRA 15	0A, 150B)		
X Sandy F	. , ,			•	lain Soils (F19)	•		
	, ,				, ,		A 452C 452D)	
Suipped	d Matrix (S6)		Anoma	ilous brign	t Loamy Solis (F20) (MLRA 14 9	7A, 153C, 153D)	
	irface (S7) (LRR P,	S, T, U)	Anoma	llous Brigh	i Loamy Solis (F20) (MLRA 14 9	7A, 193C, 193D)	
Dark Su	ırface (S7) (LRR P,		Anoma	llous Brigit	Loamy Soils (F20) (MLRA 148	6A, 153C, 153D)	
Dark Su	arface (S7) (LRR P,	:		llous Brigit	t Loamy Solis (F20) (MLRA 14:	, 155C, 155D)	
Dark Su	arface (S7) (LRR P,	:		llous Bright	t Loamy Solis (e Y No
Dark Su	arface (S7) (LRR P,	:		llous Bright	t Loamy Solis (: Soil Present? Yes	s <u>X</u> No
Dark Su Restrictive L Type: Depth (ind	arface (S7) (LRR P,	:		lious Brigii	t Loamy Solis (s <u>X</u> No
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		lious Brigii	t Loamy Solis (s X No
Dark Su Restrictive L Type: Depth (inc	arface (S7) (LRR P,	:		ilous Brigit	t Loamy Solis (s <u>X</u> No
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		ilous Brigit	Loamy Solis (s <u>X</u> No
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		ilous Brigit	t Loamy Solis (s <u>X</u> No
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		ilous Brigit	t Loamy Solis (s <u>X</u> No
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		ilous Brigit	t Loamy Solis (s X No
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		ilous brigit	Loamy Solis (s <u>X</u> No
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		ious brigit	Loamy Solis (s X No
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		ious brigit	Loamy Solis (s X No
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		ilous brigit	Loamy Solis (s X No
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		ilous Brigit	Loamy Solis (s <u>X</u> No
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		ilous Brigit	Loamy Solis (s X No
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		ilous Brigin	Loamy Solis (s <u>X</u> No
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		ilous Brigin	Loamy Solis (s <u>X</u> No
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		ilous Brigin	Loamy Solis (sXNo
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		ious brigir	Loamy Solis (sXNo
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		ious brigir	Loamy Solis (sXNo
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		ious brigir	Loamy Solis (s <u>X</u> No
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		ious brigir	Loamy Solis (sXNo
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		ious brigit	Loamy Solis (sXNo
Dark Su Restrictive L Type: Depth (inc	Layer (if observed) Ches):	:		ious brigit	Loamy Solis (s_X_No

Project/Site:	Bluewater SPM	С	ounty:	Nueces		Sampling Date:	February 5, 2019
Applicant/Owner:	Lloyd Engineer		Stat		Texas	Sample Point:	•
· · · — — — — — — — — — — — — — — — — —	Bailey and 1		Section, Township	o. Range:		 N/A	
Landform (hillslope, terrace, et			ocal relief (conca	_	none):		pe (%): 0-5
0 1 . ((DD 141D4)	None		Lat: 27.8				Datum: North American Datum 1983
Soil Map Unit Name:		y loam, rarely floo			_	sification:	N/A
Are climatic / hydrologic conditi				YES		olain in Remarks.	
Are Vegetation No	- ·		antly disturbed?		_ ` '		•
Are Vegetation No			-			lain any answers	
CUMMARY OF FINDIA			•		•	•	•
SUMMARY OF FINDIN	165 - Attach Site map	snowing sa	mpling poin	t location	is, transe	cts, importa	nt reatures, etc.
Hydrophytic Vegetation Prese	ent? Yes	NoX					
Hydric Soil Present?		No X	Is the Samp	led Area			
Wetland Hydrology Present?		No X	within a We	tland?	Yes		NoX
		·					
Remarks:							
This point was determined	d not to be within a wetland due	e to the lack of all	three wetland cri	iteria.			
HYDROLOGY							
Wetland hydrology India	cators:				Secondar	y Indicators (min	imum of two required)
Primary Indicators (minim	um of one is required; check al	ll that apply)			Sui	face Soil Cracks	(B6)
Surface Water (A1)		Aquatic Fauna (I	B13)		Spa	arsely Vegetated	Concave Surface (B8)
High Water Table (A2)	Marl Deposits (B	15) (LRR U)		Dra	ainage Patterns (I	310)
Saturation (A3)		Hydrogen Sulfide	e Odor (C1)		Mo	ss Trim Lines (B	16)
Water Marks (B1)		Oxidized Rhizos	pheres on Living	Roots(C3)	Dry	-Season Water 1	able (C2)
Sediment Deposits	(B2)	Presence of Rec	luced Iron (C4)		Cra	yfish Burrows (C	8)
Drift Deposits (B3)		Recent Iron Red	uction in Tilled S	oils (C6)	Sat	uration Visible or	n Aerial Imagery (C9)
Algal Mat or Crust ((B4)	Thin Muck Surfa	ce (C7)		Ge	omorphic Positio	າ (D2)
Iron Deposits (B5)		Other (Explain in	n Remarks)		Sha	allow Aquitard (D	3)
Inundation Visible o	on Aerial Imagery (B7)				FA	C-Neutral Test (E)5)
Water-Stained Lea	ves (B9)				Spl	nagnum moss (D	8) (LRR T, U)
Field Observations:							
Surface Water Present?	Yes NoX	Depth (inches)): N/A				
Water Table Present?	Yes NoX	Depth (inches)): >20				
Saturation Present?	Yes NoX	Depth (inches)): >20	Wetland Hy	ydrology Pro	esent? Yes_	NoX
(includes capillary fringe)							
Describe Recorded Data	(stream gauge, monitoring well	, aerial photos, pr	evious inspection	ns), if availabl	e:		
Remarks:							
No positive indication of u	vetland budralagu waa abaanya	۵.					
No positive indication of w	vetland hydrology was observe	u.					

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft \	% cover	Species?	Status	Number of Dominant Species	
4 44 64 4			Оресіез:	Otatus	·	/A\
					That Are OBL, FACW, or FAC:	(A)
2						
3					Total Number of Dominant	
4					Species Across All Strata: 0	(B)
5						
6					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC:	(A/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1. None Observed	·				Total % Cover of: Multiply by:	Ì
2.					OBL species 0 x 1 = 0	
3.				-	FACW species 0 x 2 = 0	_
					FAC species 0 x 3 = 0	_
4			-		· — — — — — — — — — — — — — — — — — — —	_
5						-
6					UPL species	—
			= Total Cover		Column Totals: (A) 0	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = N/A	
1. None Observed						
2.					Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
4.					2 - Dominance Test is >50%	
5.					3 - Prevalence Index is ≤ 3.0 ¹	
					Problematic Hydrophytic Vegetation ¹ (Explain)	
6			T-1-1-0		Problematic Hydrophytic vegetation (Explain)	
			= Total Cover	_	1	
		0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
1. None Observed					Definitions of Five Vegetation Strata:	
2					Tree - Woody plants, excluding woody vines,	
3					approximately 20 ft (6m) or more in height and 3 in.	
4					(7.6 cm) or larger in diameter at breast height (DBH).	
5.						
6.					Sapling - Woody plants, excluding woody vines,	
			-		approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8						
9					Shrub - Woody plants, excluding woody vines,	
10						
11					approximately 3 to 20 ft (1 to 6 m) in height.	
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size	:30 ft)				herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2.					3 ft (1 m) in height.	
3.						
4.					Woody vine - All woody vines, regardless of height.	
						i
5	-		= Total Cover		Lindrambudia	
			= Total Cover	_	Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes NoX	
Remarks: (if observed, list m	norphological adaptat	ions below).			
No positive indication of buds	anhutia vagatatian uu		d (>EOO/ of dominan	t anasias inda	aved as EAC as dries)	
No positive indication of hydr	opnytic vegetation wa	as observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).	
No vegetation present.						

	Matrix			Redox F	eatures				
Depth inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-20	10YR 5/1	100	None	_			Sandy Loam		
Type: C=C	concentration, D=De	pletion, RM=	Reduced Matrix,	MS=Masked	d Sand Grains.	² Location: P	L=Pore Lining, M=Matrix	⟨.	
lydric Soils	s Indicators: (App	licable to al	LRRs, unless o	therwise n	oted.)		Indicators for Proble	ematic Hydric Soils ³ :	
Histoso	ol (A1)		Polyva	alue Below :	Surface (S8) (L	RR S, T, U)	1 cm Muck (A9)	(LRR O)	
Histic E	Epipedon (A2)		Thin [Oark Surface	e (S9) (LRR S,	T, U)	2 cm Muck (A10) (LRR S)	
Black F	Histic (A3)		Loamy	y Mucky Mir	neral (F1) (LRR	O)	Reduced Vertic	(F18) (outside MLRA 150A,	
— Hydrog	gen Sulfide (A4)		Loam	y Gleyed Ma	atrix (F2)		Piedmont Flood	olain Soils (F19) (LRR P, S,	
Stratified Layers (A5)			Deple	ted Matrix (I	F3)			nt Loamy Soils (F20)	
Organic Bodies (A6) (LRR P, T, U)			Redox	ι Dark Surfa	ace (F6)		(MLRA 153B)		
5 cm M	lucky Mineral (A7) (I	LRR P, T, U)	 Deple	ted Dark Su	urface (F7)		Red Parent Mate	erial (TF2)	
Muck P	Presence (A8) (LRR	: U)	Redox	c Depression	ns (F8)		Very Shallow Dark Surface (TF12)		
1 cm Muck (A9) (LRR P, T)				U)		Other (Explain in Remarks)			
Deplete	ed Below Dark Surfa	ace (A11)	Deple	ted Ochric ((F11) (MLRA 1 5	51)			
Thick D	Dark Surface (A12)		Iron-M	langanese l	Masses (F12) (LRR O, P, T)		hydrophytic vegetation and	
Coast F	Prairie Redox (A16)	(MLRA 150)	4) Umbri	c Surface (F	F13) (LRR P, T ,	, U)	•	logy must be present,	
Sandy I	Mucky Mineral (S1)	(LRR O, S)	 Delta	Ochric (F17	7) (MLRA 151)		unless disturb	ed or problematic.	
Sandy (Gleyed Matrix (S4)		Reduc	ced Vertic (F	F18) (MLRA 15	0A, 150B)			
Sandy I	Redox (S5)		Piedm	ont Floodpl	lain Soils (F19)	(MLRA 149A)			
Strippe	ed Matrix (S6)		Anom	alous Bright	t Loamy Soils (F	- - - - - - - - - - - - - - - - - - -	9A, 153C, 153D)		
Dark Sı	urface (S7) (LRR P	, S, T, U)	<u></u>						
_									
Restrictive	Layer (if observed) :							
Type:									
	nches):					Hydrid	Soil Present? Yes	No X	
	,					-	_		
Remarks:						!			

Project/Site:		Bluewater SPM		County:	Nueces	Sampling	g Date: F	ebruary 5, 2019
Applicant/Owner:		Lloyd Eng	ineering	Sta			Point:	DPB048 U
Investigator(s):	C. Bailey	/ and _	N. Trivino	Section, Townshi	ip, Range:	·	N/A	
Landform (hillslope, to			ch	Local relief (conc	ave, convex,	none): None	Slope (%):	0-5
Subregion (LRR or M			 ne	Lat:27.8	373819	Long: -97.0920	48 Datum	: North American Datum 1983
Soil Map Unit Name:	,	ljar	m clay loam, rarely t			NWI Classification	 1:	N/A
Are climatic / hydrolog	gic conditions or	n the site typical for	this time of year?	(Yes / No)	YES	(if no, explain in R	emarks.)	
Are Vegetation	No ,Soil_	No ,or Hydrolo	ogy No signi	ficantly disturbed?	Are "Norma	I Circumstances" pres	ent? Yes	X No
Are Vegetation	No ,Soil	No ,or Hydrolo		rally problematic?		f needed, explain any		
SIIMMADVOE	EINDINGS	Attach site n	an showing s	sampling poir	at location	ns, transects, im	nortant fo	aturos oto
30WIWAKT OF	I INDINGS	- Allacii Sile ii	iap snowing s	samping pon	it iocatioi	is, transects, in	iportant le	atures, etc.
Hydrophytic Vegetat	ion Present?	Yes	NoX					
Hydric Soil Present?	?	Yes		Is the Samp	oled Area			
Wetland Hydrology	Present?	Yes	No X	within a We	∍tland?	Yes	No	X
Remarks:								
This point was d	latarminad not t	o ho within a watlan	d due to the leek of	all three wetland o	ritorio			
I his point was d	etermined not to	o be within a wetlan	d due to the lack of	all three wetland c	riteria.			
HYDROLOGY								
Wetland hydrol	ogy Indicators	:				Secondary Indicate	ors (minimum c	of two required)
Primary Indicato	rs (minimum of	one is required; che	ck all that apply)				l Cracks (B6)	
Surface W	Vater (A1)	•	Aquatic Faun	a (B13)				ve Surface (B8)
	er Table (A2)	_	 '	(B15) (LRR U)			atterns (B10)	(- /
Saturation	, ,	_		fide Odor (C1)		Moss Trim L		
Water Ma		_		ospheres on Living	Roots(C3)		Water Table (0	C2)
	Deposits (B2)	_		Reduced Iron (C4)	()	Crayfish Bu	,	- ,
Drift Depo		_		Reduction in Tilled S	Soils (C6)		/isible on Aerial	Imagery (C9)
· ·	or Crust (B4)	_	Thin Muck Su		,		Position (D2)	0 , (,
Iron Depo		_	Other (Explain	, ,		Shallow Aqu	, ,	
· — ·	. ,	ial Imagery (B7)		,		FAC-Neutra		
	ained Leaves (B	, ,					moss (D8) (LRF	R T. U)
	`	- /				' '	(-/(, -,
Field Observations	 }:							
Surface Water Pres	ent? Yes	No X	Depth (inch	es): N/A				
Water Table Presen			Depth (inch	es): >20				
Saturation Present?		No X	Depth (inch	es): >20	Wetland H	lydrology Present?	Yes	No X
(includes capillary fr	inge)							
Describe Record	ded Data (strear	m gauge, monitoring	well, aerial photos,	, previous inspectio	ns), if availab	le:		
Remarks:								
No positive indic	ation of wetland	d hydrology was obs	erved.					

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:30_ft)	% cover	Species?	Status	Number of Dominant Species	
1. None Observed				That Are OBL, FACW, or FAC: 0 (A	A)
2.					
3.				Total Number of Dominant	
4.				Species Across All Strata: 0 (E	3)
5.					,
6.				Percent of Dominant Species	
<u> </u>		= Total Cover		-	4/B)
50% of total	-	20% of total cover:	0	(,,
Sapling Stratum (Plot size: 30 ft.)	11 cover	_ 2070 OI total cover.		Prevalence Index Worksheet:	
1. None Observed				Total % Cover of: Multiply by:	
				OBL species 0 x 1 = 0	_
2					_
3					_
4				FAC species 0 x 3 = 0 FACU species 0 x 4 = 0	_
5					_
6					— _(D)
500/ 51 1		_= Total Cover		Column Totals: 0 (A) 0	_ (B)
	al cover: 0	_ 20% of total cover:	0		
Shrub Stratum (Plot size: 30 ft.)				Prevalence Index = B/A = N/A	_
1. None Observed					
2.				Hydrophytic Vegetation Indicators:	
3				1 - Rapid Test for Hydrophytic Vegetation	
4				2 - Dominance Test is >50%	
5				3 - Prevalence Index is ≤ 3.0 ¹	
6				Problematic Hydrophytic Vegetation ¹ (Explain)	
	0	_= Total Cover			
50% of total	al cover:0	_ 20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size: 30 ft.)				be present, unless disturbed or problematic.	
1. None Observed				Definitions of Five Vegetation Strata:	
2				Tree - Woody plants, excluding woody vines,	
3				approximately 20 ft (6m) or more in height and 3 in.	
4				(7.6 cm) or larger in diameter at breast height (DBH).	
5					
6				Sapling - Woody plants, excluding woody vines,	
7				approximately 20 ft (6 m) or more in height and less	
8				than 3 in. (7.6 cm) DBH.	
9					
10				Shrub - Woody plants, excluding woody vines,	
11	<u></u>			approximately 3 to 20 ft (1 to 6 m) in height.	
	0	= Total Cover			
50% of total	al cover: 0	20% of total cover:	0	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size: 30 ft	.)	_		herbaceous vines, regardless of size, and woody	
1. None Observed	·			plants, except woody vines, less than approximately	
2.		<u> </u>		3 ft (1 m) in height.	
3.					
4.				Woody vine - All woody vines, regardless of height.	
5.	_				
		= Total Cover		Hydrophytic	
50% of total	al cover: 0	20% of total cover:	0	Vegetation	
				Present? Yes NoX	
				100 100	
Remarks: (if observed, list morphological	adantations helov	w)			
rtemarks. (ii observed, list morphological	adaptations below	v).			
No positive indication of hydrophytic veget	ation was observe	ed (≥50% of dominar	nt species inde	exed as FAC- or drier).	
No vegetation present.					

	Matrix			Redox F			ence of indicators.)		
Depth inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-20	10YR 5/1	100	None				Sandy Loam		
Type: C=C	 Concentration, D=Dep	oletion. RM=	Reduced Matrix. W	S=Masked	d Sand Grains.	² Location: P	L=Pore Lining, M=Matri	 (.	
	s Indicators: (Appl							ematic Hydric Soils ³ :	
Histos					Surface (S8) (LI	RR S. T. U)	1 cm Muck (A9)		
Histic Epipedon (A2)					e (S9) (LRR S,		2 cm Muck (A10		
Black Histic (A3)					neral (F1) (LRR			(F18) (outside MLRA 150A ,	
Hydrogen Sulfide (A4)				Gleyed Ma		-,		plain Soils (F19) (LRR P, S,	
Hydrogen Suifide (A4) Stratified Layers (A5)				ed Matrix (F				nt Loamy Soils (F20)	
Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U)				Dark Surfa	*		(MLRA 153B)		
	, , ,			ed Dark Su			Red Parent Mate	erial (TF2)	
5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U)				Depression	` '		Very Shallow Dark Surface (TF12)		
				Marl (F10) (LRR U)			Other (Explain in	n Remarks)	
	ed Below Dark Surfa				F11) (MLRA 15	1)		,	
	Dark Surface (A12)	` ,			Masses (F12) (I	-	³ Indicators of	hydrophytic vegetation and	
	Prairie Redox (A16) ((MLRA 150		-	13) (LRR P, T,	· · · · · · · · · · · ·	•	logy must be present,	
	Mucky Mineral (S1)	•	· —) (MLRA 151)	,	unless disturb	ed or problematic.	
	Gleyed Matrix (S4)			•	18) (MLRA 15 0	A, 150B)			
	Redox (S5)			•	ain Soils (F19) (•			
	ed Matrix (S6)					-	9A, 153C, 153D)		
	Surface (S7) (LRR P,	S, T, U)		_					
Restrictive	Layer (if observed)	:							
Type:									
Depth (ii							dric Soil Present? Yes No X		
							_		
Remarks:									
No positive	indication of hydric s	oils was ob	served.						

Project/Site:	Bluewater SPM	Cou	unty:	Nueces	Sampling D	Date: February 5, 2019
Applicant/Owner:	Lloyd Engineer		State			pint: DPB049_PEM
• • • • • • • • • • • • • • • • • • • •	· · · ·		ction, Township,		·	 N/A
Landform (hillslope, terrace, e		ter Lo	cal relief (conca	ve, convex, non-	e): Concave	Slope (%): 0-5
Subregion (LRR or MLRA):						Datum: North American Datum 1983
Soil Map Unit Name:		y loam, rarely flood			NWI Classification:	
Are climatic / hydrologic cond	itions on the site typical for this t	time of year? (Y	'es / No)		if no, explain in Rem	
Are Vegetation No	,Soil No ,or Hydrology	No significan	tly disturbed?	Are "Normal Cir	cumstances" present	t? Yes <u>X</u> No
Are Vegetation No	,Soil No ,or Hydrology	No naturally	problematic?	(If ne	eded, explain any ans	swers in Remarks.)
SLIMMARY OF FINDI	NGS - Attach site map	showing sam	nlina noint	locations	transacts imn	ortant features etc
- COMMINICATOR FINEDI		Jilowing Jun	ipinig ponit		transcots, imp	ortant reatures, etc.
Hydrophytic Vegetation Pres	sent? Yes X	No				
Hydric Soil Present?		No	Is the Sample	ed Area		
Wetland Hydrology Present	? Yes <u>X</u>	No	within a Wetl	and?	Yes X	No
Remarks:						
·	ed to be within a wetland due to	the presence of all	3 wetland criteri	a. 		
HYDROLOGY Wetland hydrology Ind	licatore:					
, ,		II 414 1- N			•	(minimum of two required)
	num of one is required; check al		10)		Surface Soil Cr	, ,
X Surface Water (A: High Water Table	· —	Aquatic Fauna (B1 Marl Deposits (B1		_	Sparsely vegel Drainage Patte	tated Concave Surface (B8)
Saturation (A3)	(A2)	Hydrogen Sulfide		_	Drainage Fatte Moss Trim Line	
Water Marks (B1)		Oxidized Rhizosph	, ,	- Poots(C3)		ater Table (C2)
Sediment Deposit	(==)	Presence of Redu	_	• • •	Crayfish Burrov	, ,
Drift Deposits (B3	· · · —	Recent Iron Reduc		_		ble on Aerial Imagery (C9)
X Algal Mat or Crust	· —	Thin Muck Surface			Geomorphic Po	, ,
Iron Deposits (B5)	· · —	Other (Explain in F		_	Shallow Aquita	, ,
	on Aerial Imagery (B7)	Other (Explain in)	tomanto	_	X FAC-Neutral To	, ,
Water-Stained Le				_		ss (D8) (LRR T, U)
	(= •)			_		() (, -)
Field Observations:						
Surface Water Present?	YesX No	Depth (inches):	0			
Water Table Present?	Yes NoX	Depth (inches):	>20			
Saturation Present?	Yes NoX	Depth (inches):	>20	Wetland Hydro	ology Present? \	res <u>X</u> No
(includes capillary fringe)						
Describe Recorded Data	a (stream gauge, monitoring well	, aerial photos, prev	vious inspections	s), if available:		
Remarks:						
A positive indication of w	vetland hydrology was observed	(at least one prima	ry indicator)			
A positive indication of w	reliand hydrology was observed	(at least one prima	ry iridicator).			

		Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:	30 ft \	% cover	Species?	Status	Number of Dominant Species
4 44 64 4		70 00 001	Ореоюз:	Otatus	
					That Are OBL, FACW, or FAC: (A)
2					Total Number of Deminent
3					Total Number of Dominant
4					Species Across All Strata: 1 (B)
5					
6					Percent of Dominant Species
			= Total Cover		That Are OBL, FACW, or FAC: (A/B)
	50% of total cover:	0	20% of total cover:	0	Boundary of Index Workshoot
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:
					Total % Cover of: Multiply by:
2					OBL species 90 x 1 =90
3					FACW species 0 x 2 = 0
4					FAC species 0 x 3 = 0
5					FACU species 0 x 4 = 0
6					UPL species 0 x 5 = 0
		0	= Total Cover		Column Totals: 90 (A) 90 (B)
	50% of total cover:	0	20% of total cover:	0	
Shrub Stratum (Plot size:			•		Prevalence Index = B/A = 1.00
1. None Observed					
2.	_				Hydrophytic Vegetation Indicators:
3.					1 - Rapid Test for Hydrophytic Vegetation
					X 2 - Dominance Test is >50%
4					X 3 - Prevalence Index is $\leq 3.0^{1}$
5					Problematic Hydrophytic Vegetation ¹ (Explain)
6			T		Problematic Hydrophytic Vegetation (Explain)
			= Total Cover	_	1
	50% of total cover:	0	20% of total cover:	0	Indicators of hydric soil and wetland hydrology must
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.
1. Distichlis littoralis		80	Yes	OBL	Definitions of Five Vegetation Strata:
2. Salicornia depressa		10	No	OBL	Tree - Woody plants, excluding woody vines,
3					approximately 20 ft (6m) or more in height and 3 in.
4					(7.6 cm) or larger in diameter at breast height (DBH).
5			<u> </u>		
6					Sapling - Woody plants, excluding woody vines,
7					approximately 20 ft (6 m) or more in height and less
8.					than 3 in. (7.6 cm) DBH.
9.					
10.			·		Shrub - Woody plants, excluding woody vines,
11.					approximately 3 to 20 ft (1 to 6 m) in height.
···		90	= Total Cover		
	50% of total cover:		20% of total cover:	18	Herb - All herbaceous (non-woody) plants, including
Woody Vine Stratum (Plot size:			_ =570 OI TOTAL COVEL.		herbaceous vines, regardless of size, <u>and</u> woody
1. None Observed					plants, except woody vines, less than approximately
					3 ft (1 m) in height.
2.					
3.					Woody vine - All woody vines, regardless of height.
4					Woody vine - All woody vines, regardless of height.
5					
			= Total Cover		Hydrophytic
	50% of total cover:	0	20% of total cover:	0	Vegetation
					Present? Yes <u>X</u> No
Remarks: (if observed, list me	orphological adaptat	ions below).		
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	species index	xed as OBL. FACW. or FAC).
. p = =a.aaaaa ayarop	,g.s.a Wat		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,	- ,
A positive indication of hydrop	hytic yeaetation was	observed	(Prevalence Index is	s ≤ 3.00)	
,	,		,	/-	

(inches) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks 0-3 2.5Y 5/1 100 None — — — Sandy Loam 3-20 N 4 98 10YR 5/4 2 C PL Sandy Loam	0-3 2.5Y 5/1 100 None — — — — Sandy Loam 3-20 N 4 98 10YR 5/4 2 C PL Sandy Loam 1Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 2Location: PL=Pore Lining, M=Matrix. Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problem Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (L Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F1) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodpla Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright (MLRA 153B) 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 Materia (Muck Presence (A8) (LRR U) Redox Depressions (F8) Very Shallow Dark 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Other (Explain in R	natic Hydric Soils ³ : RR O) LRR S) 18) (outside MLRA 150A
3-20 N 4 98 10YR 5/4 2 C PL Sandy Loam Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Type: Sandy Loam Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Topeletion: Type: Sandy Loam: PL=Pore Lining, M=Matrix. Indicators: PL=Pore Lining, M=Matrix. Indicators	3-20 N 4 98 10YR 5/4 2 C PL Sandy Loam Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (L Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F- Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodpla Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright I 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 Materia Muck Presence (A8) (LRR U) Redox Depressions (F8) Very Shallow Dark 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Other (Explain in Redox Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151)	RR O) LRR S) 18) (outside MLRA 150A
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. **Jocation: PL=Pore Lining, M=Matrix.* Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Tem Muck (A9) (L Common Matrix) Reduced Vertic (F) Depleted Below Dark Surface (A11) Thin Dark Surface (S8) (LRR S, T, U) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F) Piedmont Floodpla Anomalous Bright (MLRA 153B) Red Ox Derk Surface (F6) Muck Presence (A8) (LRR P, T, U) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151)	RR O) LRR S) 18) (outside MLRA 150A
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) Histic Epipedon (A2) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR P, T, U) Depleted Dark Surface (F7) Muck (A9) (LRR P, T) Marl (F10) (LRR U) Depleted Dark Surface (F7) Coast Prairie Redox (A11) Thick Dark Surface (A11) Sandy Mucky Mineral (S1) (LRR O, S) Straped Matrix (S4) Delta Ochric (F13) (LRR P, T, U) Sandy Redox (S5) Delta Ochric (F13) (MLRA 150A, 150B) Stripped Matrix (S6) Delta Corrective Layer (if observed): Type: I cm Muck (A9) (LRR P, S, T, U) I cm Muck (A9) (LRR P, S, T, U) 1 cm Muck (A9) (LRR P, S, T, U) I cm Muck (A9) (LRR P, T, U) Depleted Dark Surface (F7) Reduced Vertic (F18) (MLRA 150A, 150B) Anomalous Bright Loamy Soils (F20) MLRA 153B) A commandation Microsoft (F12) Muck Presence (A8) (LRR P, T) Marl (F10) (LRR U) Depleted Dark Surface (F7) 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 an wetland hydrology must be present, unless disturbed or problematic. **Mack Presence (A8) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) **Type: **Indicators of Problematic Hydric Soils **It MLRA 150A, 150B) **It MLRA 150A, 150B) Anomalous Bright Loamy Soils (F20) (MLRA 149A) **Type: **Indicators of Problematic Hydric Soils **It MLRA 150A, 150B) **It MLRA 150A, 150B) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Below Dark Surface (A1) Depleted Below Dark Surface (A1) Depleted Ochric (F11) (MLRA 151) Indicators for Problem 1 cm Muck (A9) (L 1 cm Muck (A9) (L 2 cm Muck (A10) (Reduced Vertic (F-1) 1 cm Muck (A9) (LRR S, T, U) 1 cm Muck (A9) (LRR P, T, U) Piedmont Floodpla Anomalous Bright (MLRA 153B) (MLRA 153B) Red Parent Materia Very Shallow Dark Other (Explain in Reduced Ochric (F11) (MLRA 151)	RR O) LRR S) 18) (outside MLRA 150A
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) Histic Epipedon (A2) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR P, T, U) Depleted Dark Surface (F7) Muck (A9) (LRR P, T) Marl (F10) (LRR U) Depleted Dark Surface (F7) Coast Prairie Redox (A11) Thick Dark Surface (A11) Sandy Mucky Mineral (S1) (LRR O, S) Straped Matrix (S4) Delta Ochric (F13) (LRR P, T, U) Sandy Redox (S5) Delta Ochric (F13) (MLRA 150A, 150B) Stripped Matrix (S6) Delta Corrective Layer (if observed): Type: I cm Muck (A9) (LRR P, S, T, U) I cm Muck (A9) (LRR P, S, T, U) 1 cm Muck (A9) (LRR P, S, T, U) I cm Muck (A9) (LRR P, T, U) Depleted Dark Surface (F7) Reduced Vertic (F18) (MLRA 150A, 150B) Anomalous Bright Loamy Soils (F20) MLRA 153B) A commandation Microsoft (F12) Muck Presence (A8) (LRR P, T) Marl (F10) (LRR U) Depleted Dark Surface (F7) 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 an wetland hydrology must be present, unless disturbed or problematic. **Mack Presence (A8) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) **Type: **Indicators of Problematic Hydric Soils **It MLRA 150A, 150B) **It MLRA 150A, 150B) Anomalous Bright Loamy Soils (F20) (MLRA 149A) **Type: **Indicators of Problematic Hydric Soils **It MLRA 150A, 150B) **It MLRA 150A, 150B) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Below Dark Surface (A1) Depleted Below Dark Surface (A1) Depleted Ochric (F11) (MLRA 151) Indicators for Problem 1 cm Muck (A9) (L 1 cm Muck (A9) (L 2 cm Muck (A10) (Reduced Vertic (F-1) 1 cm Muck (A9) (LRR S, T, U) 1 cm Muck (A9) (LRR P, T, U) Piedmont Floodpla Anomalous Bright (MLRA 153B) (MLRA 153B) Red Parent Materia Very Shallow Dark Other (Explain in Reduced Ochric (F11) (MLRA 151)	RR O) LRR S) 18) (outside MLRA 150A
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Stratified Layers (A5) Corganic Bodies (A6) (LRR P, T, U) Depleted Matrix (F2) Muck (A9) (LRR P, T, U) Depleted Dark Surface (F7) Amoral (A1) Histosol (A2) Depleted Dark Surface (F7) Muck Presence (A8) (LRR P, T) Depleted Dark Surface (F7) Muck (A9) (LRR P, T) Marl (F10) (LRR U) Depleted Dark Surface (F7) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Stripped Matrix (S6) Delta Ochric (F13) (MLRA 150A, 150B) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restore Layer (if observed): Type: I cm Muck (A9) (LRR S, T, U) Loamy Mucky Mineral (A2) Anomalous Bright Loamy Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) Muck Presence (A8) (LRR V) Depleted Dark Surface (F7) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Piedmont Floodplain Soils (F19) (MLRA 150B) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Mucky Mineral (S1) (LRR O, S) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type:	Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Indicators for Problem 1 cm Muck (A9) (L 1 cm Muck (A9) (L 2 cm Muck (A10) (Reduced Vertic (F-1) (LRR O) Reduced Vertic (F-1) Piedmont Floodpla Anomalous Bright (A7) (MLRA 153B) Muck Presence (A8) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Materia Very Shallow Dark Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151)	RR O) LRR S) 18) (outside MLRA 150A
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Stratified Layers (A5) Corganic Bodies (A6) (LRR P, T, U) Depleted Matrix (F2) Muck (A9) (LRR P, T, U) Depleted Dark Surface (F7) Amoral (A1) Histosol (A2) Depleted Dark Surface (F7) Muck Presence (A8) (LRR P, T) Depleted Dark Surface (F7) Muck (A9) (LRR P, T) Marl (F10) (LRR U) Depleted Dark Surface (F7) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Stripped Matrix (S6) Delta Ochric (F13) (MLRA 150A, 150B) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restore Layer (if observed): Type: I cm Muck (A9) (LRR S, T, U) Loamy Mucky Mineral (A2) Anomalous Bright Loamy Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) Muck Presence (A8) (LRR V) Depleted Dark Surface (F7) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Piedmont Floodplain Soils (F19) (MLRA 150B) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Mucky Mineral (S1) (LRR O, S) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type:	Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Indicators for Problem 1 cm Muck (A9) (L 1 cm Muck (A9) (L 2 cm Muck (A10) (Reduced Vertic (F-1) (LRR O) Reduced Vertic (F-1) Piedmont Floodpla Anomalous Bright (A7) (MLRA 153B) Muck Presence (A8) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Materia Very Shallow Dark Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151)	RR O) LRR S) 18) (outside MLRA 150A
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Stratified Layers (A5) Corganic Bodies (A6) (LRR P, T, U) Depleted Matrix (F2) Muck (A9) (LRR P, T, U) Depleted Dark Surface (F7) Amoral (A1) Histosol (A2) Depleted Dark Surface (F7) Muck Presence (A8) (LRR P, T) Depleted Dark Surface (F7) Muck (A9) (LRR P, T) Marl (F10) (LRR U) Depleted Dark Surface (F7) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Stripped Matrix (S6) Delta Ochric (F13) (MLRA 150A, 150B) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restore Layer (if observed): Type: I cm Muck (A9) (LRR S, T, U) Loamy Mucky Mineral (A2) Anomalous Bright Loamy Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) Muck Presence (A8) (LRR V) Depleted Dark Surface (F7) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Piedmont Floodplain Soils (F19) (MLRA 150B) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Mucky Mineral (S1) (LRR O, S) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type:	Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Indicators for Problem 1 cm Muck (A9) (L 1 cm Muck (A9) (L 2 cm Muck (A10) (Reduced Vertic (F-1) (LRR O) Reduced Vertic (F-1) Piedmont Floodpla Anomalous Bright (A7) (MLRA 153B) Muck Presence (A8) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Materia Very Shallow Dark Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151)	RR O) LRR S) 18) (outside MLRA 150A
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Stratified Layers (A5) Depleted Matrix (F2) Muck (A9) (LRR P, T, U) Depleted Dark Surface (F7) Muck (A9) (LRR P, T) 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) Stray Redox (A5) Depleted Ochric (F11) (MLRR 151) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR O, S) Stray Redox (A5) Anomalous Bright Loamy Soils (F20) Other (Explain in Remarks) Depleted Ochric (F11) (MLRR 151) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) X Sandy Redox (S5) Derived Matrix (F2) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Anomalous Bright Loamy Soils (F20) Muck Presence (A8) (LRR O, S) Anomalous Bright Loamy Soils (F10) (MLRA 149A) Anomalous Bright Loamy Soils (F20) Muck Presence (A8) (LRR O, P, T) Wery Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Sitriped Matrix (S6) Dark Surface (S7) (LRR P, T, U) Anomalous Bright Loamy Soils (F10) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Type:	Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Indicators for Problem 1 cm Muck (A9) (L 2 cm Muck (A9) (L Reduced Vertic (F-1) 1 cm Muck (A9) (LRR P, T, U) Piedmont Floodpla Anomalous Bright (MLRA 153B) (MLRA 153B) Very Shallow Dark Other (Explain in Reduced Ochric (F11) (MLRA 151)	RR O) LRR S) 18) (outside MLRA 150A
Histosol (A1)	Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (L Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Piedmont Floodpla Stratified Layers (A5) Depleted Matrix (F2) Piedmont Floodpla Anomalous Bright I Organic Bodies (A6) (LRR P, T, U) Fedox Dark Surface (F6) Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Materia Muck Presence (A8) (LRR U) Redox Depressions (F8) Very Shallow Dark 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151)	RR O) LRR S) 18) (outside MLRA 150A
Histic Epipedon (A2) Black Histic (A3) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Anomalous Bright Loamy Soils (F20) Muck Presence (A8) Depleted Dark Surface (F7) Marl (F10) (LRR U) Depleted Dark Surface (F7) 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) X Sandy Gleyed Matrix (S6) Dark Surface (S9) (LRR S, T, U) Depleted Matrix (F2) Piedmont Floodplain Soils (F20) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Z Setrictive Layer (if observed): Type:	Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Below Dark Surface (A11) Thin Dark Surface (S9) (LRR S, T, U) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F- Piedmont Floodpla Anomalous Bright I (MLRA 153B) Red Ozark Surface (F6) Muck Presence (A8) (LRR P, T, U) Redox Depressions (F8) Very Shallow Dark Other (Explain in R	LRR S) 18) (outside MLRA 150A
Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150 Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, 7 Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 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) Depleted Vertic (F18) (outside MLRA 150 (MLRA 153B) Redox Dark Surface (F6) (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) Umbric Surface (F13) (LRR P, T, U) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Piedmont Floodplain Soils (F19) (MLRA 150A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type:	Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F- Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright I Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Depleted Dark Surface (F6) Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Materia Very Shallow Dark 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151)	18) (outside MLRA 150A
Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stom Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F6) Muck Presence (A8) (LRR U) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) X Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Dark Surface (S7) (LRR P, T, U) Depleted Dark Surface (F13) (MLRA 150A) Redox Depressions (F8) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Jepleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Sandy Mucky Mineral (S1) (LRR O, S) Reduced Vertic (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 150A) Reduced Vertic (F18) (MLRA 150A, 150B) X Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type:	Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Loamy Gleyed Matrix (F2) Piedmont Floodpla Anomalous Bright (MLRA 153B) Redox Dark Surface (F6) (MLRA 153B) Red Parent Materia Very Shallow Dark Other (Explain in R	, .
Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Fedox Dark Surface (F6) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Red Parent Material (TF2) Moure Presence (A8) (LRR U) Depleted Dark Surface (F7) 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) X Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Depleted Matrix (F3) Red Dark Surface (F7) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Iron-Manganese Masses (F12) (LRR O, P, T) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Type:	Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Dark Surface (F7) Medox Derk Surface (F7) Red Parent Materia Very Shallow Dark 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151)	in Soils (F19) /I RR P S
Organic Bodies (A6) (LRR P, T, U) Som Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Derk Surface (F8) Marl (F10) (LRR U) Depleted Derk Surface (F7) 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) X Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Redox Dark Surface (F6) Medox Dark Surface (F7) Redox Dark Surface (F7) Redox Dark Surface (F7) Redox Dark Surface (F7) Redox Dark Surface (F7) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Iron-Manganese Masses (F12) (LRR O, P, T) Jandicators of hydrophytic vegetation an wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR P, T, U) Urbor-Manganese Masses (F12) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR P, T, U) Marl (F10) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR P, T, U) Marl (F10) (LRR P, T, U) Marl (F10) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Dark Surface (F6) Medox Derk Surface (F7) Red Parent Materia Very Shallow Dark Marl (F10) (LRR U) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151)	11 0013 (1 10) (EIRICI, 0,
5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) X Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Jepleted Cohric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Wetland hydrology must be present, unless disturbed or problematic. Delta Ochric (F17) (MLRA 150A, 150B) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type:	5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Red Parent Materia Very Shallow Dark Other (Explain in R	Loamy Soils (F20)
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) X Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Marl (F10) (LRR U) Depleted Depressions (F8) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation an wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR O, P, T) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR O, P, T) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR O, P, T) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	Muck Presence (A8) (LRR U) Redox Depressions (F8) Very Shallow Dark 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Other (Explain in R Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151)	
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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Marl (F10) (LRR U) Other (Explain in Remarks) In Cast Pair (Redox (F12) (LRR O, P, T) Other (Explain in Remarks) Other (Expla	1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Other (Explain in R Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151)	` '
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Wetland hydrology must be present, unless disturbed or problematic. 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) Restrictive Layer (if observed): Type:	Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151)	,
Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type:		lemarks)
Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) X Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: 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. Meduced Vertic (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type:	Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Indicators of hy	
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) 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) Restrictive Layer (if observed): Type:	wetland bydrolog	
Sandy Mucky Mineral (S1) (LRR O, S) X Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type:	Unless disturbed	•
X 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) Restrictive Layer (if observed): Type:	Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151)	
Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type:	 -	
Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type:		
Restrictive Layer (if observed): Type:		
Type:	Dark Surface (S7) (LRR P, S, T, U)	
Type:	Poetrictive Laver (if observed):	
· — — — — — — — — — — — — — — — — — — —		
Depth (inches): Hydric Soil Present? Yes X No		V N-
	Depth (inches): Hydric Soil Present? Yes	XNO
Remarks:		

Project/Site:	Bluewater SPM	Cou	unty:	Nueces	Sa	mpling Date:	February 5, 2019
Applicant/Owner:	Lloyd Engineeri		State			ample Point:	DPB050 PEM
···	Bailey and N	I. Trivino Se	ction, Township	Range:	-	 N/A	
Landform (hillslope, terrace, etc		er Loc	cal relief (conca	ve, convex, no	ne): Con	cave Slope (%): 0-5
	None		Lat: 27.87			.092659 Da	tum: North American Datum 1983
Soil Map Unit Name:		loam, rarely flood	ed		NWI Classif	ication:	N/A
Are climatic / hydrologic condition	ons on the site typical for this ti	me of year? (Y	'es / No)	YES	_ (if no, explai	n in Remarks.)	
Are Vegetation No ,S	Soil No , or Hydrology	No significan	tly disturbed?	Are "Normal C	Circumstances	" present? Yes	X No
Are Vegetation No, 5	Soil No , or Hydrology	No naturally	problematic?	(If n	eeded, explai	n any answers in	Remarks.)
SUMMARY OF FINDING	GS - Attach site map	showing sam	nolina point	locations	. transect	s. important	features, etc.
			, , , , , , , , , , , , , , , , , , ,		,		
Hydrophytic Vegetation Preser	nt? Yes X I	No					
Hydric Soil Present?		No	Is the Sample		.,		
Wetland Hydrology Present?	Yes X	No	within a Wet	and?	Yes	X No	
Remarks:			1				
·	to be within a wetland due to t	he presence of all	3 wetland criteri	a.			
HYDROLOGY							
Wetland hydrology Indica	ators:				Secondary I	ndicators (minimu	m of two required)
Primary Indicators (minimu	m of one is required; check all	that apply)				ce Soil Cracks (B	·
X Surface Water (A1)		Aquatic Fauna (B1	•			-	ncave Surface (B8)
High Water Table (A	· —	Marl Deposits (B1				age Patterns (B10))
Saturation (A3)		Hydrogen Sulfide	, ,	2(00)		Trim Lines (B16)	I. (00)
Water Marks (B1)		Oxidized Rhizosph	_	Roots(C3)		eason Water Tab	le (C2)
Sediment Deposits (· —	Presence of Redu		:1- (00)		sh Burrows (C8)	(CO)
Drift Deposits (B3)		Recent Iron Reduc		ilis (Co)			erial Imagery (C9)
X Algal Mat or Crust (E Iron Deposits (B5)	· —	Thin Muck Surface Other (Explain in F	, ,			orphic Position (E	02)
	n Aerial Imagery (B7)	Otrier (Explain in F	Remarks)			w Aquitard (D3)	
Water-Stained Leave	, ,					Neutral Test (D5) gnum moss (D8) (I DD T III
Water-Stained Leave	es (De)				орпаў	gridini moss (Do) (LKK 1, 0)
Field Observations:							
Surface Water Present? Y	es X No	Depth (inches):	2				
Water Table Present? Y	es No X	Depth (inches):	>20				
Saturation Present? Y	'es NoX	Depth (inches):	>20	Wetland Hyd	Irology Prese	ent? Yes	X No
(includes capillary fringe)							
Describe Recorded Data (s	stream gauge, monitoring well,	aerial photos, prev	vious inspection	s), if available:			
Remarks:							
A positive indication of wet	land hydrology was observed (at least one prima	ry indicator)				
'	, 5,		,				
Aquatic Fauna: crabs.							

Sampling Point: DPB050_PEM

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Troc Stratum (Diet size:	20 ft \	% cover	Species?	Status	Number of Dominant Species	
Tree Stratum (Plot size:		76 COVEI	<u>Species :</u>	Status	·	(4)
					That Are OBL, FACW, or FAC:	(A)
2						
3					Total Number of Dominant	
4					Species Across All Strata: 2	. (B)
5						
6	 				Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC:100%	(A/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1. None Observed					Total % Cover of: Multiply by	:
2					OBL species 40 x 1 = 40	
3					FACW species 75 x 2 = 150	
4					FAC species 0 x 3 = 0	
5.					FACU species 0 x 4 = 0	
6.					UPL species 0 x 5 = 0	
	<u> </u>	0	= Total Cover		Column Totals: 115 (A) 190	(B)
	50% of total cover:	0	20% of total cover:	0		``
Shrub Stratum (Plot size:					Prevalence Index = B/A = 1.65	
1. None Observed						
2.	-				Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
4.			·		X 2 - Dominance Test is >50%	
					X 3 - Prevalence Index is $\leq 3.0^{1}$	
5					Problematic Hydrophytic Vegetation ¹ (Explain	.\
6	-				Problematic Hydrophytic Vegetation (Explain	')
	500/ - \$4.4.1		= Total Cover	0	1	
Harly Objections (District	50% of total cover:		20% of total cover:	0	'Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)	00	.,	E 4 014/	be present, unless disturbed or problematic.	
1. Lycium carolinianum		60	Yes	FACW	Definitions of Five Vegetation Strata:	
2. Salicornia bigelovii		30	Yes	OBL	Tree - Woody plants, excluding woody vines,	
3. Carex cherokeensis		5	No	<u>FACW</u>	approximately 20 ft (6m) or more in height and 3 in.	
4. Axonopus fissifolius		10	No	<u>FACW</u>	(7.6 cm) or larger in diameter at breast height (DBH).	
5. Eleocharis palustris		10	No	OBL_		
6					Sapling - Woody plants, excluding woody vines,	
7					approximately 20 ft (6 m) or more in height and less	
8					than 3 in. (7.6 cm) DBH.	
9						
10					Shrub - Woody plants, excluding woody vines,	
11			·		approximately 3 to 20 ft (1 to 6 m) in height.	
		115	= Total Cover			
	50% of total cover:	57.5	20% of total cover:	23	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size	:30 ft)				herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2.					3 ft (1 m) in height.	
3.						
4.					Woody vine - All woody vines, regardless of height.	
5.	<u>'</u>					
			= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes X No	
Remarks: (if observed, list m	norphological adaptati	ons below) <u>.</u>		L	
A positive indication of hydro	pnytic vegetation was	observed	(>50% of dominant	species index	xed as OBL, FACW, or FAC).	
A 40				. 0 . 2		
A positive indication of hydro	pnytic vegetation was	observed	(Prevalence Index is	s ≤ 3.00).		

Sampling Point: DPB050_PEM

Depth	Matrix			Redox F	eatures			
inches)	Color (moist)	_%_	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks
0-3	2.5Y 5/1	100	None				Sandy Loam	
3-20	N 4	98	10YR 5/4_	2	C	PL	Sandy Loam	
	Concentration, D=Dep					² Location: F	L=Pore Lining, M=Matrix	
Hydric Soil	ls Indicators: (Appl	icable to a	•		•		Indicators for Proble	
Histos	ol (A1)				Surface (S8) (LF		1 cm Muck (A9)	
	Epipedon (A2)				e (S9) (LRR S, 1		2 cm Muck (A10)	
	Histic (A3)				neral (F1) (LRR	O)		F18) (outside MLRA 150A,
	gen Sulfide (A4)			Gleyed M				lain Soils (F19) (LRR P, S, '
	ed Layers (A5)			ed Matrix (•			t Loamy Soils (F20)
	ic Bodies (A6) (LRR			Dark Surfa	, ,		(MLRA 153B)	
	/lucky Mineral (A7) (L		<i></i> '		urface (F7)		Red Parent Mate	` '
	Presence (A8) (LRR	•		Depressio	` '			rk Surface (TF12)
	/luck (A9) (LRR P, T)			10) (LRR	-		Other (Explain in	Remarks)
	ed Below Dark Surfa	ice (A11)			(F11) (MLRA 15	-	3, ,, ,	
	Dark Surface (A12)			-	Masses (F12) (I			nydrophytic vegetation and logy must be present,
	Prairie Redox (A16)	-	· —	•	F13) (LRR P, T,	U)	•	ed or problematic.
	Mucky Mineral (S1)	(LRR O, S)			7) (MLRA 151)			'
	Gleyed Matrix (S4)				F18) (MLRA 150	· ·		
	Redox (S5)			•	lain Soils (F19) (
	ed Matrix (S6)		Anomal	ous Brigh	t Loamy Soils (F	20) (MLRA 14	9A, 153C, 153D)	
Dark S	Surface (S7) (LRR P,	S, T, U)						
Restrictive	Layer (if observed)):						
Type:								
Depth (i	nches):					Hydri	c Soil Present? Yes	X No
							_	
Remarks:								
A positive in	ndication of hydric so	il was obse	rved.					

Project/Site:	Bluewater SPM	County:	Nueces	Sampling Date:	February 5, 2019
Applicant/Owner:	Lloyd Engineering				•
	niley and N. Trivino	Section, Townshi	p. Range:	 N/A	
Landform (hillslope, terrace, etc.):			ave, convex, none)		pe (%): 0-5
0 1 : ((DD 14(DA))	None	\ Lat: 27.8			Datum: North American Datum 1983
Soil Map Unit Name:	ljam clay loam, ra			WI Classification:	N/A
	s on the site typical for this time of year			no, explain in Remarks.	
Are Vegetation No ,So	••	· / —	,	umstances" present?	•
Are Vegetation No ,So		naturally problematic?		led, explain any answers	
			•		•
SUMMARY OF FINDING	S - Attach site map showir	ig sampling poin	it iocations, ti	ansects, importa	int reatures, etc.
Hydrophytic Vegetation Present?	? Yes No X				
Hydric Soil Present?	Yes No X	Is the Samp	led Area		
Wetland Hydrology Present?	Yes X No	within a We	tland?	Yes	No X
Remarks:					
HYDROLOGY	ot to be within a wetland due to the lac		,		
Wetland hydrology Indicat			<u>Se</u>	econdary Indicators (min	-
, , , , , , , , , , , , , , , , , , , ,	of one is required; check all that appl	• /		Surface Soil Cracks	, ,
Surface Water (A1)		Fauna (B13)	_	, ,	Concave Surface (B8)
High Water Table (A2)		osits (B15) (LRR U)	_	Drainage Patterns (•
X Saturation (A3)	 · ·	n Sulfide Odor (C1)	_	Moss Trim Lines (B	•
Water Marks (B1)		Rhizospheres on Living	Roots(C3)	Dry-Season Water	, ,
Sediment Deposits (B2	· —	e of Reduced Iron (C4)	_	Crayfish Burrows (C	·
Drift Deposits (B3)		on Reduction in Tilled S	oils (C6)	_	n Aerial Imagery (C9)
Algal Mat or Crust (B4	•	k Surface (C7)	_	Geomorphic Positio	, ,
Iron Deposits (B5)		kplain in Remarks)		Shallow Aquitard (D	3)
Inundation Visible on A	, ,		_	FAC-Neutral Test ([)5)
Water-Stained Leaves	; (B9)		_	Sphagnum moss (D	8) (LRR T, U)
Field Observed and			T		
Field Observations:					
		(inches): N/A			
		(inches): >20	Wedler dilledes	D	V N-
Saturation Present? Yes (includes capillary fringe)	sX No Depth ((inches):0	Wetland Hydrol	ogy Present? Yes _	XNO
	ream gauge, monitoring well, aerial ph	otos, previous inspectio	ns), if available:		
Remarks:					
A positive indication of wetla	nd hydrology was observed (at least o	one primary indicator).			

Sampling Point: DPB051_U

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft \	% cover	Species?	Status	Number of Dominant Species	
4 44 64 4			Оресіез:	Otatus	·	/A\
					That Are OBL, FACW, or FAC:	(A)
2						
3					Total Number of Dominant	
4					Species Across All Strata: 0	(B)
5						
6					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC:	(A/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1. None Observed	·				Total % Cover of: Multiply by:	Ì
2.					OBL species 0 x 1 = 0	
3.				-	FACW species 0 x 2 = 0	_
					FAC species 0 x 3 = 0	_
4			-		· — — — — — — — — — — — — — — — — — — —	_
5						-
6					UPL species	—
			= Total Cover		Column Totals: (A) 0	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = N/A	
1. None Observed						
2.					Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
4.					2 - Dominance Test is >50%	
5.					3 - Prevalence Index is ≤ 3.0 ¹	
					Problematic Hydrophytic Vegetation ¹ (Explain)	
6			T-1-1-0		Problematic Hydrophytic vegetation (Explain)	
			= Total Cover	_	1	
		0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
1. None Observed					Definitions of Five Vegetation Strata:	
2					Tree - Woody plants, excluding woody vines,	
3					approximately 20 ft (6m) or more in height and 3 in.	
4					(7.6 cm) or larger in diameter at breast height (DBH).	
5.						
6.					Sapling - Woody plants, excluding woody vines,	
			-		approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8						
9					Shrub - Woody plants, excluding woody vines,	
10						
11					approximately 3 to 20 ft (1 to 6 m) in height.	
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size	:30 ft)				herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2.					3 ft (1 m) in height.	
3.						
4.					Woody vine - All woody vines, regardless of height.	
						i
5	-		= Total Cavar		Lindrambudia	
			= Total Cover	_	Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes NoX	
Remarks: (if observed, list m	norphological adaptat	ions below).			
No positive indication of buds	anhutia vagatatian uu		d (>EOO/ of dominan	t anasias inde	aved as EAC as dries)	
No positive indication of hydr	opnytic vegetation wa	as observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).	
No vegetation present.						

epth	Matrix			Redox F	eatures					
nches)_	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0					<u> </u>			Shovel re	estriction	
			I=Reduced Matrix, M			² Location: P	L=Pore Lining, M=			
lydric Soils I	ndicators: (Appl	licable to a	all LRRs, unless ot		•		Indicators for F			
Histosol (,				Surface (S8) (L			(A9) (LRR O	•	
	pedon (A2)				e (S9) (LRR S ,	· ·		(A10) (LRR \$	•	
Black His	` ,			-	neral (F1) (LRR	(O)			utside MLRA 150A,E	
	Sulfide (A4)			Gleyed Ma	` ,			•	ls (F19) (LRR P, S, T	
	Layers (A5)		 '	ed Matrix (•			Bright Loam	y Soils (F20)	
	sodies (A6) (LRR			Dark Surfa	• •		(MLRA 153	•		
5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7)				` '			t Material (TF	•		
Muck Presence (A8) (LRR U) Redox Depre				•	` '	Very Shallow Dark Surface (TF12)				
	k (A9) (LRR P, T)		Marl (F	10) (LRR	U)		Other (Exp	lain in Remar	ks)	
	Below Dark Surfa	ice (A11)			(F11) (MLRA 1	•	2			
Thick Dar	k Surface (A12)		Iron-Ma	anganese l	Masses (F12)	LRR O, P, T)	³ Indicators of hydrophytic vegetation and			
Coast Pra	irie Redox (A16)	(MLRA 15	DA) Umbric	Surface (I	F13) (LRR P, T	, U)	wetland hydrology must be present, unless disturbed or problematic.			
	ıcky Mineral (S1)	(LRR O, S) Delta C	chric (F17	7) (MLRA 151)		u555 u	отага от р.	o biomatio.	
Sandy Gl	eyed Matrix (S4)				F18) (MLRA 15	· ·				
Sandy Re	dox (S5)		Piedmo	nt Floodpl	lain Soils (F19)	(MLRA 149A)				
	Matrix (S6)		Anoma	lous Brigh	t Loamy Soils (I	F20) (MLRA 14 9	9A, 153C, 153D)			
Dark Surf	ace (S7) (LRR P ,	S, T, U)								
Restrictive La	yer (if observed)):								
Type:	Concrete									
Depth (inch						Hydrid	Soil Present?	es es	No X	
	, <u> </u>									
Remarks:	<u> </u>			·						

Project/Site:	Bluewater SPM	(County:	Nueces		Sampling Dat	te: Feb	ruary 5, 2019
•	Lloyd Engineer		Stat		Texas			•
· · · — — — — — — — — — — — — — — — — —	· · · · · ·		Section, Township				N/A	
Landform (hillslope, terrace, etc.):			Local relief (conca	ive, convex, r	none):	None S	Slope (%):	0-5
Subregion (LRR or MLRA):					· ·		Datum:	North American Datum 1983
Soil Map Unit Name:		ay loam, rarely flo				sification:		N/A
Are climatic / hydrologic conditions	on the site typical for this	time of year?						
Are Vegetation No ,Soi	INo,or Hydrology	No signific	cantly disturbed?	Are "Normal	Circumstand	ces" present?	Yes X	No
Are Vegetation No ,Soi	l No ,or Hydrology	No natura	lly problematic?	(If	needed, exp	olain any answ	vers in Rema	rks.)
SUMMARY OF FINDING	S - Attach site man	showing s	ampling poin	t location	e tranco	cts imno	rtant foat	uras atc
	- Attach Site map	- Silowing St		· iocation	3, traiise	cts, impo	- tuiit iout	
Hydrophytic Vegetation Present?		No						
Hydric Soil Present?	YesX	No	Is the Samp	led Area				
Wetland Hydrology Present?	YesX	No	within a We	tland?	Yes	X	No	
Remarks: This point was determined to	be within a wetland due to	the presence of	all 3 wetland crite	ria.				
HYDROLOGY								
Wetland hydrology Indicate	rs:				Secondar	y Indicators (r	minimum of to	wo required)
Primary Indicators (minimum	of one is required; check a	ll that apply)			Sui	face Soil Cra	cks (B6)	
X Surface Water (A1)	<u>X</u>	Aquatic Fauna	(B13)		Spa	arsely Vegeta	ted Concave	Surface (B8)
High Water Table (A2)		Marl Deposits (ainage Patterr		
Saturation (A3)		Hydrogen Sulfic	, ,			ss Trim Lines		
Water Marks (B1)			spheres on Living	Roots(C3)		-Season Wat)
Sediment Deposits (B2			educed Iron (C4)			yfish Burrows		
Drift Deposits (B3)			duction in Tilled S	oils (C6)		turation Visible		nagery (C9)
Algal Mat or Crust (B4)		Thin Muck Surf	, ,			omorphic Pos		
Iron Deposits (B5)	(5-)	Other (Explain	in Remarks)			allow Aquitard		
Inundation Visible on A	, ,					C-Neutral Tes	. ,	
Water-Stained Leaves	(B9)				Spi	hagnum moss	(D8) (LRR T	r, U)
Field Observations:								
	X No	Depth (inches	s): 2					
	No	Depth (inches	<i>'</i>					
	NoX	Depth (inches		Wetland Hy	drology Pr	esent? Ye	s X	No
(includes capillary fringe)		2 0 μ (ο			,			
Describe Recorded Data (stre	eam gauge, monitoring well	l, aerial photos, μ	previous inspection	ns), if availabl	e:			
Remarks:								
Remarks.								
A positive indication of wetlar	d hydrology was observed	(at least one pri	mary indicator).					
Aquatic Fauna: fish, crabs.								

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft.)	% cover	Species?	Status	Number of Dominant Species	
1 Name Observed	,				That Are OBL, FACW, or FAC:2	(A)
2.						
3					Total Number of Dominant	
4					Species Across All Strata: 2	(B)
5						
6					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC:100%	(A/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1. None Observed					Total % Cover of: Multiply by:	
2					OBL species 30 x 1 = 30	
3					FACW species 0 x 2 = 0	
4					FAC species 0 x 3 = 0	
5					FACU species 0 x 4 = 0	
6					UPL species 0 x 5 = 0	
		0	= Total Cover		Column Totals: (A) 30	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size: 1. None Observed	30 ft.)				Prevalence Index = B/A = 1.00	
_	-				Hydrophytic Vegetation Indicators:	
					1 - Rapid Test for Hydrophytic Vegetation	
3					X 2 - Dominance Test is >50%	
4					X 3 - Prevalence Index is $\leq 3.0^{1}$	
5.					Problematic Hydrophytic Vegetation ¹ (Explain)	
6			T-1-1-0		Problematic Hydrophytic Vegetation (Explain)	
	500/ 5/ / 1		= Total Cover	0	1	
Harl Objections (District	50% of total cover:		20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)	4.5	V	ODL	be present, unless disturbed or problematic.	
Salicornia depressa Salicornia elterreitlera		15	Yes Yes	OBL	Definitions of Five Vegetation Strata:	
Spartina alterniflora Avianania paraniana			Yes	OBL_	Tree - Woody plants, excluding woody vines,	
3. Avicennia germinans		5	No	OBL_	approximately 20 ft (6m) or more in height and 3 in.	
4					(7.6 cm) or larger in diameter at breast height (DBH).	
5			-		Sapling - Woody plants, excluding woody vines,	
6					approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8					than 6 m. (7.6 om) BBm.	
9					Shrub - Woody plants, excluding woody vines,	
10	-				approximately 3 to 20 ft (1 to 6 m) in height.	
11			T + 1 0		approximately 6 to 20 ft (1 to 6 m) in neight.	
	F00/ -51:4:1		= Total Cover	C	Herb - All herbaceous (non-woody) plants, including	
	50% of total cover:	15	20% of total cover:	6	herbaceous vines, regardless of size, and woody	
Woody Vine Stratum (Plot size:	30 ft.)				plants, except woody vines, less than approximately	
1. None Observed					3 ft (1 m) in height.	
2					on (1 m) in neight.	
3	<u> </u>				Woody vine - All woody vines, regardless of height.	
4					violaty vine - All woody vines, regardless of fleight.	
5			T + 1 0			
	500/ · 54. · · ·		= Total Cover	0	Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes <u>X</u> No	
Remarks: (if observed, list mo	orphological adaptat	ions below).		1	
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	species index	ked as OBL, FACW, or FAC).	
A positive indication of hydrop	hytic vegetation was	observed	(Prevalence Index is	s ≤ 3.00).		

Depth	Matrix			Redox F	eatures			
inches)	Color (moist)	<u>%</u>	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks
0-3	2.5Y_5/1_	100	None				Sand	Gravel mixed with matrix.
3-20	N 4	_98_	10YR 5/4	_2_	C	PL	Sand	
				_				
		_		_				
Type: C=C	oncentration, D=Dep	 oletion, RM=	 Reduced Matrix, N	 MS=Masked	d Sand Grains.	² Location: Pl	 _=Pore Lining, M=	Matrix.
•	s Indicators: (Appl	icable to al	•		•		Indicators for F	Problematic Hydric Soils ³ :
Histoso	ol (A1)				Surface (S8) (L		1 cm Muck	(A9) (LRR O)
Histic E	Epipedon (A2)		Thin D	ark Surface	e (S9) (LRR S ,	T, U)	2 cm Muck	(A10) (LRR S)
Black F	Histic (A3)		Loamy	Mucky Mir	neral (F1) (LRR	(O)	Reduced V	vertic (F18) (outside MLRA 150A,
Hydrog	en Sulfide (A4)		Loamy	Gleyed Ma	atrix (F2)		Piedmont F	Floodplain Soils (F19) (LRR P, S, T
	ed Layers (A5)		Deplet	ed Matrix (F	F3)		Anomalous	Bright Loamy Soils (F20)
Organi	c Bodies (A6) (LRR I	P, T, U)	Redox	Dark Surfa	ice (F6)		(MLRA 15	3B)
5 cm M	lucky Mineral (A7) (L	RR P, T, U		ed Dark Su	, ,		Red Paren	t Material (TF2)
Muck F	Presence (A8) (LRR	U)	Redox	Depression	ns (F8)		Very Shallo	ow Dark Surface (TF12)
1 cm M	luck (A9) (LRR P, T)		Marl (F	=10) (LRR l	J)		Other (Exp	lain in Remarks)
Deplete	ed Below Dark Surfa	ce (A11)	Deplet	ed Ochric (F11) (MLRA 1	51)	_	
Thick D	Dark Surface (A12)		Iron-M	anganese N	Masses (F12)	(LRR O, P, T)		ors of hydrophytic vegetation and
Coast F	Prairie Redox (A16) (MLRA 150	A) Umbrid	c Surface (F	=13) (LRR P, T	, U)		hydrology must be present, listurbed or problematic.
Sandy	Mucky Mineral (S1)	(LRR O, S)	Delta (Ochric (F17) (MLRA 151)		unicss u	isturbed of problematic.
X Sandy	Gleyed Matrix (S4)		Reduc	ed Vertic (F	18) (MLRA 15	0A, 150B)		
X Sandy	Redox (S5)		Piedm	ont Floodpl	ain Soils (F19)	(MLRA 149A)		
Strippe	d Matrix (S6)		Anoma	alous Bright	Loamy Soils (I	=20) (MLRA 149	A, 153C, 153D)	
Dark S	urface (S7) (LRR P,	S, T, U)						
Restrictive	Layer (if observed)	:						
Type:								
Depth (in	nches):					Hydric	Soil Present?	Yes X No
Remarks:						!		
A positive in	dication of hydric soi	l was obser	ved.					

US Army Corps of Engineers

Project/Site:	ı	Bluewater SPM		County:	Nueces	Sampling	Date: Fe	ebruary 5, 2019
Applicant/Owner:		Lloyd Engir		Sta			Point:	
Investigator(s):		and	N. Trivino	Section, Townshi	-	<u> </u>	N/A	
Landform (hillslope, terra			Itwater	Local relief (conc	ave, convex, nor	ne): Concave	Slope (%):	0-5
Subregion (LRR or MLR				Lat:27.8	75774 Lo	ng: -97.09384	1 Datum	: North American Datum 1983
Soil Map Unit Name:		ljarr	ı clay loam, rarely fl			NWI Classification:		N/A
Are climatic / hydrologic	conditions on	the site typical for t	his time of year?	(Yes / No)	YES	(if no, explain in Re	marks.)	
Are VegetationI	No,Soil	No ,or Hydrolog	gy No signif	icantly disturbed?	Are "Normal Ci	ircumstances" prese	nt? Yes	X No
Are VegetationI	No,Soil	No ,or Hydrolog	y <u>No</u> natur	ally problematic?	(If ne	eeded, explain any a	nswers in Ren	narks.)
SUMMARY OF FI	NDINGS -	Attach site m	ap showing s	ampling poir	it locations,	transects, im	portant fe	atures, etc.
						•	<u> </u>	
Hydrophytic Vegetation	Present?	Yes	NoX					
Hydric Soil Present?	i iosont:	Yes	No X	Is the Samp	led Δrea			
Wetland Hydrology Pre	sent?	Yes	No X	within a We		Yes	No	X
,								
Remarks:								
This point was deta	rmined not to	be within a wetland	due to the lack of	all three wetland o	riteria			
This point was dete	mined not to	be within a wettand	due to the lack of	all tillee wetland ti	iteria.			
HYDROLOGY								
Wetland hydrolog	•					Secondary Indicato	•	f two required)
-		one is required; chec			·	Surface Soil	, ,	
Surface Wat	` ,	_	Aquatic Fauna	, ,				ve Surface (B8)
High Water		_		(B15) (LRR U)		Drainage Pat		
Saturation (A	•	_	Hydrogen Sulf	, ,		Moss Trim Li	, ,	
Water Marks	` '	_	Oxidized Rhize	ospheres on Living	Roots(C3)		Water Table (0	J2)
Sediment De	posits (B2)	_	Presence of R	leduced Iron (C4)		Crayfish Burr	ows (C8)	
Drift Deposit	3 (B3)	_	Recent Iron Re	eduction in Tilled S	ioils (C6)	Saturation Vi	sible on Aerial	Imagery (C9)
Algal Mat or	Crust (B4)	_	Thin Muck Su	rface (C7)		Geomorphic	Position (D2)	
Iron Deposits	(B5)	_	Other (Explain	in Remarks)		Shallow Aqui	tard (D3)	
Inundation V	sible on Aeria	al Imagery (B7)				FAC-Neutral	Test (D5)	
Water-Staine	ed Leaves (B9))				Sphagnum m	noss (D8) (LRF	₹ T, U)
Field Observations:								
Surface Water Present		NoX	_ · ·	<i>'</i>				
Water Table Present?		NoX	_ ' `	· ——				
Saturation Present? (includes capillary fring	Yes	NoX	Depth (inche	es): <u>>20</u>	Wetland Hydr	rology Present?	Yes	NoX
` ' '								
Describe Recorded	Data (stream	n gauge, monitoring	weii, aeriai pnotos,	previous inspectio	ns), if available:			
Remarks:								
No positive indicati	on of wetland	hydrology was obse	erved.					
İ								

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft \	% cover	Species?	Status	Number of Dominant Species	
1 Name Observed		70 COVE	Оресіез:	Otatus	·	
					That Are OBL, FACW, or FAC: (A	٦)
2						
3					Total Number of Dominant	
4					Species Across All Strata: 0 (E	3)
5						
6					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC: (A	√B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1 Nana Observed					Total % Cover of: Multiply by:	
2.					OBL species 0 x 1 = 0	_
					FACW species	_
3						_
4						_
5					FACU species 0 x 4 = 0	_
6					UPL species 0 x 5 = 0	_
			= Total Cover		Column Totals: 0 (A) 0	_ (B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = N/A	_
1. None Observed						
2.	_				Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
					2 - Dominance Test is >50%	
4					3 - Prevalence Index is ≤ 3.0 ¹	
5.					Problematic Hydrophytic Vegetation ¹ (Explain)	
6					Problematic Hydrophytic Vegetation (Explain)	
			= Total Cover		4	
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
1. None Observed					Definitions of Five Vegetation Strata:	
2					Tree - Woody plants, excluding woody vines,	
3					approximately 20 ft (6m) or more in height and 3 in.	
4.			· · · · · · · · · · · · · · · · · · ·	-	(7.6 cm) or larger in diameter at breast height (DBH).	
5.						
6.					Sapling - Woody plants, excluding woody vines,	
			-		approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8						
9					Shrub - Woody plants, excluding woody vines,	
10					approximately 3 to 20 ft (1 to 6 m) in height.	
11						
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:	30 ft)				herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2					3 ft (1 m) in height.	
3.						
4.	-		·		Woody vine - All woody vines, regardless of height.	
5.	•					
o		0	= Total Cover		Hydrophytic	
	50% of total cover:		20% of total cover:	0	Vegetation	
	50% of total cover.		20% of total cover.		-	
					Present? Yes NoX	
Remarks: (if observed, list m	orphological adaptat	ions below).			
No positive indication of hydro	phytic vegetation wa	as observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).	
peeinte maieanen et ilyan	prijus regetation in		a (=0070 0. aona	. 0000.00	5.50 45 1716 6. 4.151).	
No vogetation present						
No vegetation present.						

Depth	Matrix			Redox F	eatures			
inches)	Color (moist)	%	Color (moist)	%_	Type ¹	Loc ²	Texture	Remarks
0-20	10YR 5/1	100	None	_			Sandy Loam	
				_				
Type: C=C	 Concentration, D=Dep	 letion. RM=	Reduced Matrix	. <u>——</u> . MS=Masked	d Sand Grains.	² Location: P	 L=Pore Lining, M=Matrix	·.
	s Indicators: (Appli						Indicators for Proble	
Histoso	ol (A1)		Poly	value Below S	Surface (S8) (L	.RR S, T, U)	1 cm Muck (A9)	(LRR O)
— Histic E	Epipedon (A2)		Thin	Dark Surface	e (S9) (LRR S,	T, U)	2 cm Muck (A10)	(LRR S)
— Black H	Histic (A3)		 Loar	ny Mucky Mir	neral (F1) (LRF	(O)	Reduced Vertic (F18) (outside MLRA 150A
	gen Sulfide (A4)		 Loar	ny Gleyed Ma	atrix (F2)		Piedmont Floodp	olain Soils (F19) (LRR P, S,
· ·	ed Layers (A5)			eted Matrix (F	` ,			nt Loamy Soils (F20)
— Organi	c Bodies (A6) (LRR I	P, T, U)	Rede	ox Dark Surfa	ice (F6)		(MLRA 153B)	
5 cm N	lucky Mineral (A7) (L	RR P, T, U) Depl	eted Dark Su	ırface (F7)		Red Parent Mate	erial (TF2)
Muck F	Presence (A8) (LRR I	U)	Red	ox Depression	ns (F8)		Very Shallow Da	rk Surface (TF12)
 1 cm M	luck (A9) (LRR P, T)			(F10) (LRR I			Other (Explain in	, ,
	ed Below Dark Surface				F11) (MLRA 1	51)		,
Thick [Dark Surface (A12)	, ,	Iron-	Manganese N	Masses (F12)	(LRR O, P, T)	³ Indicators of I	nydrophytic vegetation and
— Coast I	Prairie Redox (A16) (MLRA 150	A) Umb	ric Surface (F	- - - - - - - - - - - - - - - - - - -	, U)		logy must be present,
— Sandy	Mucky Mineral (S1) (LRR O, S)	Delta	a Ochric (F17) (MLRA 151)		unless disturb	ed or problematic.
Sandy	Gleyed Matrix (S4)		Red	uced Vertic (F	18) (MLRA 15	0A, 150B)		
	Redox (S5)			•		(MLRA 149A)		
	ed Matrix (S6)			•	,	` '	9A, 153C, 153D)	
	urface (S7) (LRR P,	S. T. U)		5	, ,	-71	,,,	
	. , ,							
Type:	Layer (if observed):	•						
Depth (ir	nches):					Hydrid	Soil Present? Yes _	NoX
Remarks:								
l =	indication of hydric so	.:						
io positive	indication of flydric so	JIIS WAS OU	serveu.					

Project/Site:	Bluewater SPM	(County:	Nueces		Sampling Date	: Fe	ebruary 5, 2019
Applicant/Owner:	Lloyd Engineer		Stat		Texas	Sample Point:		DPB054 U
· · · — — — — — — — — — — — — — — — — —	ailey and N		Section, Townshi	o, Range:			I/A	
Landform (hillslope, terrace, etc.			Local relief (conc	_	none):	None SI	ope (%):	0-5
0 1 ((100 14104)	None		Lat: 27.8		Long:			North American Datum 1983
Soil Map Unit Name:		y loam, rarely flo	oded —			assification:	_	N/A
Are climatic / hydrologic condition	ns on the site typical for this t	ime of year?	(Yes / No)	YES	(if no, ex	kplain in Remark	s.)	
Are Vegetation No ,S	Soil No ,or Hydrology	No signific	cantly disturbed?	Are "Norma	I Circumsta	nces" present?	Yes	X No
Are Vegetation No ,S	oil No ,or Hydrology	No natura	lly problematic?	(It	f needed, ex	kplain any answe	ers in Rem	narks.)
SUMMARY OF FINDING		showing sa	ampling poin	t location	ne trane	acts impor	tant fos	aturos oto
	- Attach Site map	3110Willig 30	inping pon	it iocatioi	13, 114113	ects, impor	tant ice	
Hydrophytic Vegetation Presen	t? Yes	NoX						
Hydric Soil Present?	YesX	No	Is the Samp	led Area				
Wetland Hydrology Present?	Yes X	No	within a We	tland?	Ye	s	No	X
Remarks:								
This point was determined a	not to be within a wetland due	to the lack of h	vdronhytic vegeta	tion				
This point was determined i	not to be within a wettand due	e to the lack of h	ydiopilylic vegeta	tion.				
HYDROLOGY								
Wetland hydrology Indica	ntors:				Seconda	ary Indicators (m	inimum of	f two required)
Primary Indicators (minimur	m of one is required; check al	l that apply)			S	urface Soil Crack	ks (B6)	
X Surface Water (A1)	Х	Aquatic Fauna	(B13)		s	parsely Vegetate	ed Concav	e Surface (B8)
High Water Table (A		Marl Deposits (I				rainage Patterns		` ,
Saturation (A3)		Hydrogen Sulfic	de Odor (C1)		M	oss Trim Lines (B16)	
Water Marks (B1)			spheres on Living	Roots(C3)		ry-Season Wate	,	(2)
Sediment Deposits (E	32)		educed Iron (C4)	` ,		rayfish Burrows	,	,
Drift Deposits (B3)	, <u> </u>		duction in Tilled S	oils (C6)		aturation Visible		Imagery (C9)
Algal Mat or Crust (B	4)	Thin Muck Surfa		,		eomorphic Posit		<i>5</i>
Iron Deposits (B5)	<i></i>	Other (Explain i	, ,			hallow Aquitard (
Inundation Visible on	Aerial Imagery (B7)	` '	,			AC-Neutral Test		
Water-Stained Leave	, ,					phagnum moss (, ,	₹ T. U)
	(-)					, 5	/ (, -,
Field Observations:								
Surface Water Present? Ye	es X No	Depth (inches	s): 0					
	es No X	Depth (inches	s): >20					
	es No X	Depth (inches	s): >20	Wetland H	ydrology P	resent? Yes	X	No
(includes capillary fringe)								
Describe Recorded Data (s	tream gauge, monitoring well	, aerial photos, p	previous inspection	ns), if availab	le:			
,			•	,.				
Remarks:								
A positive indication of wetle	and hydrology was observed	(at least one prin	mary indicator).					
Aquatic Fauna: crabs.								

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Troo Stratum (Plot aiza: 20 f	F4 \	% cover	Species?	Status		
Tree Stratum (Plot size: 30 f		70 COVE	Species?	Status	Number of Dominant Species	/A\
1. None Observed					That Are OBL, FACW, or FAC:0	(A)
2						
3					Total Number of Dominant	
4					Species Across All Strata:	(B)
5						
6		-			Percent of Dominant Species	
			= Total Cover		That Are OBL, FACW, or FAC:	(A/B)
50%	of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size: 30 1	<u>ft.</u>)				Prevalence Index Worksheet:	
1. None Observed			<u> </u>		Total % Cover of: Multiply by:	
2			. <u> </u>		OBL species 0 x 1 = 0	
3			<u> </u>		FACW species 0 x 2 = 0	
4					FAC species 0 x 3 = 0	
5					FACU species 0 x 4 = 0	
6					UPL species 0 x 5 = 0	
		0	= Total Cover		Column Totals: 0 (A) 0	(B)
50%	of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size: 30 t					Prevalence Index = B/A = N/A	
1. None Observed						
2.					Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
4.					2 - Dominance Test is >50%	
5.					3 - Prevalence Index is ≤ 3.0 ¹	
					Problematic Hydrophytic Vegetation ¹ (Explain)	
6			= Total Cover		1 Toblematic Trydrophytic Vegetation (Explain)	
F09/	of total cover			0	1 Indicators of hydric soil and watland hydrology must	
	of total cover:		20% of total cover:		¹ Indicators of hydric soil and wetland hydrology must	
	<u>ft.</u>)				be present, unless disturbed or problematic.	
1. None Observed					Definitions of Five Vegetation Strata:	
2					Tree - Woody plants, excluding woody vines,	
3			·		approximately 20 ft (6m) or more in height and 3 in.	
4					(7.6 cm) or larger in diameter at breast height (DBH).	
5					Sapling - Woody plants, excluding woody vines,	
6						
7					approximately 20 ft (6 m) or more in height and less	
8					than 3 in. (7.6 cm) DBH.	
9					Observe Wasselson and Alberta sound a financial and	
10					Shrub - Woody plants, excluding woody vines,	
11					approximately 3 to 20 ft (1 to 6 m) in height.	
		0	= Total Cover			
50%	of total cover:	0	20% of total cover:	0	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:	30 ft.)				herbaceous vines, regardless of size, <u>and</u> woody	
1. None Observed					plants, except woody vines, less than approximately	
2					3 ft (1 m) in height.	
3						
4					Woody vine - All woody vines, regardless of height.	
5						
		0	= Total Cover		Hydrophytic	
50%	of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes NoX	
Remarks: (if observed, list morphole	ogical adaptati	ons below).		•	
			- (>==00/ -== -=============================	4ii	aved as EAC andrian)	
No positive indication of hydrophytic	vegetation wa	is observe	d (≥50% or dominan	t species inde	exed as FAC- or drier).	
No vegetation present.						

Color (moist)	epth	Matrix			Redox F	eatures			
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. **Location: PL=Pore Lining, M=Matrix.** Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Histosol (A1)	nches)_	Color (moist)	<u>%</u>	Color (moist)	%_	Type ¹	Loc ²	Texture	Remarks
lydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	0-20	10YR 4/2	_98_	10YR 3/6	_2_	C	PL	Sandy Clay	
lydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
lydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
lydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
lydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
lydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
lydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)		Concentration D=Der	oletion RM=	Reduced Matrix 1	—— MS=Maske	d Sand Grains	² I ocation: P	PI =Pore Lining M=Matri	x
Histosol (A1) Histic Epipedon (A2) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) Loamy Mucky Mineral (F1) (LRR O) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, T) Popelted Dark Surface (F6) Muck Presence (A8) (LRR P, T, U) Popelted Dark Surface (F7) Muck (A9) (LRR P, T, U) Pepleted Dark Surface (F7) Marl (F10) (LRR U) Popelted Dark Surface (F7) Marl (F10) (LRR U) Popelted Delow 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) Piedmont Floodplain Soils (F20) Marl (F10) (LRR U) Popleted Dark Surface (A11) Sandy Mucky Mineral (S1) (LRR O, S) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR O, S, T, U) Redox Depressions (F8) Marl (F10) (LRR U) Popleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Were Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No							200440		
Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Mucky Mineral (A7) (LRR P, T, U) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 153B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Redox Depressions (F8) 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) X Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Redox Depressions (F8) Umbric Surface (F13) (LRR D, P, T) Deleted Ochric (F13) (MLRA 150A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Reduced Vertic (F18) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Reduced Vertic (F16) (MLRA 149A, 150C, 153D) Reduced Vertic (F16) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	•	,		•		•	.RR S, T, U)		
Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Defined more in the foliation of the foliation	— Histic E	Epipedon (A2)		Thin D	ark Surfac	e (S9) (LRR S ,	T, U)	2 cm Muck (A10)) (LRR S)
Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) For Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) 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 Redox (S5) Stripped Matrix (S4) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Redox Depressions (F8) Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Wettland hydrology must be present, unless disturbed or problematic. Reduced Vertic (F18) (MLRA 150B) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Black H	Histic (A3)		Loamy	/ Mucky Mi	neral (F1) (LRR	(O)	Reduced Vertic	(F18) (outside MLRA 150A,
Organic Bodies (A6) (LRR P, T, U) Som Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Dark Surface (S7) (LRR P, T, U) Redox Depressions (F8) Depleted Dark Surface (F7) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Depleted Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Hydrog	gen Sulfide (A4)		Loamy	/ Gleyed M	atrix (F2)		Piedmont Flood	plain 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 Dark Surface (F7) 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) Dark Surface (S7) (LRR P, S, T, U) Depleted Dark Surface (F1) Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Stratifie	ed Layers (A5)		Deplet	ted Matrix (F3)		Anomalous Brig	ht Loamy Soils (F20)
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) Dark Surface (S7) (LRR P, S, T, U) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Liron-Manganese Masses (F12) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Umbric Surface (F13) (LRR P, T, U) Umbric Surface (F13) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Neduced Vertic (F18) (MLRA 150A) Marl (F10) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Methods (F13) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (MLRA 150A) Wetland hydrology must be present, unless disturbed or problematic. Marl (F10) (MLRA 150A) Methods (F13) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Methods (F13) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Methods (F13) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes X No	Organi	c Bodies (A6) (LRR	P, T, U)	Redox	Dark Surfa	ace (F6)		(MLRA 153B)	
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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Depleted Ochric (F11) (MLRA 151) Depleted Ochric (F11) (MLRA 0, P, T) Were Layer (if observed): Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Wetland hydrology must be present, unless disturbed or problematic. Metland 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) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	5 cm N	lucky Mineral (A7) (L	RR P, T, U) Deplet	ted Dark Sı	urface (F7)		Red Parent Mat	erial (TF2)
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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Jepleted Ochric (F11) (MLRA 0, P, T) Jepleted Ochric (F11) (MLRA 0, P, T) Jepleted Ochric (F12) (LRR O, P, T) Jepleted Ochric (F13) (LRR O, P, T) Jepleted Ochric (F12) (LRR O, P, T) Jepleted Ochric (F13) (LRR O, P, T) Jep	Muck F	Presence (A8) (LRR	U)		•	` '		Very Shallow Da	ark Surface (TF12)
Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Iron-Manganese Masses (F12) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Umbric Surface (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) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No		, , , .		Marl (I	F10) (LRR	U)		Other (Explain i	n Remarks)
Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Limbric Surface (F13) (LRR P, T, U) Wetland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic.			ice (A11)				-	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) Restrictive Layer (if observed): Type: Depth (inches): 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) Hydric Soil Present? Yes X No		, ,			-	, ,			, , , ,
Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B)		, ,	-		•		, U)	•	•
X Sandy Redox (S5)		- , ,	(LRR O, S)		,				·
Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? YesX No		- , ,				* *	· ·		
Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No		, ,			•	` '		04 4530 4530)	
Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No		` ,	e T II)	Anoma	alous Brign	t Loamy Solls (F	-20) (WLKA 14	9A, 153C, 153D)	
Type: Hydric Soil Present? YesX No	Dark S	unace (37) (LKK P,	3, 1, 0)						
Depth (inches): Hydric Soil Present? Yes X No	estrictive	Layer (if observed)):						
Depth (inches): Hydric Soil Present? Yes X No	Type:								
							Hydri	c Soil Present? Yes	X No
demarks:		, 						_	
	emarks:								

Project/Site:	Bluewater SPM	Cou	nty:	Nueces	S	ampling Date:	February 5, 2019
Applicant/Owner:	Lloyd Engineeri	ng	State	:	Texas S	Sample Point:	DPB055_PEM
Investigator(s): C. E	Bailey and N	. Trivino Sec	tion, Township	Range:		N/A	
Landform (hillslope, terrace, etc.		er Loc	al relief (conca	e, convex, n	one):N	one Slope	(%): 0-5
Subregion (LRR or MLRA):	None		Lat: 27.87	7191 L	.ong:9	7.095292 Da	tum: North American Datum 1983
Soil Map Unit Name:		loam, rarely floode			_ NWI Class	ification:	E1UBLx
Are climatic / hydrologic condition	••	,	· —		_ ` .	ain in Remarks.)	
Are Vegetation No ,S			-			s" present? Yes	
Are Vegetation No ,S	Soil No ,or Hydrology _	No naturally p	oroblematic?	11)	needed, expla	ain any answers in	Remarks.)
SUMMARY OF FINDING	GS - Attach site map	showing sam	pling point	locations	s, transec	ts, important	features, etc.
Hydrophytic Vegetation Preser	nt? Yes X !	No					
Hydric Soil Present?			Is the Sample	ed Area			
Wetland Hydrology Present?			within a Wet		Yes	X No	·
Remarks:							
This point was determined	to be within a wetland due to t	he presence of all 3	3 wetland criteri	а			
Triio point was determined	to be within a welland due to t	no procence or all c	o wouldn't onton	ч.			
HYDROLOGY							
Wetland hydrology Indica	ators:				Cocondony	Indicatora (minimu	um of two required)
	m of one is required; check all	that apply)				ace Soil Cracks (B	um of two required)
Surface Water (A1)	·	Aquatic Fauna (B1:	3)			•	oncave Surface (B8)
High Water Table (A		Marl Deposits (B15	•			nage Patterns (B10	` ,
X Saturation (A3)		Hydrogen Sulfide C				Trim Lines (B16)	•
Water Marks (B1)		Oxidized Rhizosph	, ,	Roots(C3)		Season Water Tab	
Sediment Deposits (Presence of Reduc	_	, ,		fish Burrows (C8)	` ,
X Drift Deposits (B3)	<u> </u>	Recent Iron Reduc	tion in Tilled Sc	ils (C6)	Satu	ration Visible on A	erial Imagery (C9)
Algal Mat or Crust (E		Thin Muck Surface	(C7)		Geor	morphic Position (I	D2)
Iron Deposits (B5)		Other (Explain in R	Remarks)		Shal	low Aquitard (D3)	
Inundation Visible or	n Aerial Imagery (B7)				X FAC	-Neutral Test (D5)	
Water-Stained Leave	es (B9)				Spha	agnum moss (D8)	(LRR T, U)
Field Observations							
Field Observations:	N. V	Death (in the c)	N//A				
	es NoX es	Depth (inches):	N/A >20				
	es NoX esX No	Depth (inches): Depth (inches):	0	Wotland Hy	drology Pres	sent? Yes	Y No
(includes capillary fringe)	es <u>X</u> NO	Deptil (illeries).		Wedana Hy	urology i res		<u> </u>
Describe Recorded Data (s	stream gauge, monitoring well,	aerial photos, prev	ious inspection	s), if available):		
,			•	,,			
Remarks:							
A positive indication of wet	land hydrology was observed (at least one primar	y indicator).				
Aquatic Fauna: crabs.							
Aquatic i auria. crabs.							

Sampling Point:	DPB055_PEM
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		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft.)	% cover	Species?	Status	Number of Dominant Species	
4 44 64 4			<u> </u>		·	(A)
2.			·			(' ')
3.			<u> </u>		Total Number of Dominant	
						(B)
4					opecies Across Air Otrata.	(6)
5			·		Demont of Deminant Country	
6			- Tatal Causa		Percent of Dominant Species	(A /D)
	500/ 51 1		= Total Cover	•	That Are OBL, FACW, or FAC: 100%	(A/B)
0 1: 0:	50% of total cover:		20% of total cover:	0	Prevalence Index Worksheet:	
Sapling Stratum (Plot size:	30 ft.)					
1. None Observed			. <u> </u>		Total % Cover of: Multiply by:	
2					OBL species115 x 1 =115	
3			. <u> </u>		FACW species 0 x 2 = 0	
4					FAC species 0 x 3 = 0	
5			<u> </u>		FACU species 0 x 4 = 0	
6			<u> </u>		UPL species 0 x 5 = 0	
		0	= Total Cover		Column Totals: (A)115	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = 1.00	
1. None Observed						
2.			· <u></u>		Hydrophytic Vegetation Indicators:	
3.			· <u>- </u>		1 - Rapid Test for Hydrophytic Vegetation	
4.				_	X 2 - Dominance Test is >50%	
5.					X 3 - Prevalence Index is ≤ 3.0 ¹	
			<u> </u>		Problematic Hydrophytic Vegetation ¹ (Explain)	
6			= Total Cover		(
	EOO/ of total agreem		20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Harb Stratum (Diet size)	50% of total cover: 30 ft.)		20% of total cover.		be present, unless disturbed or problematic.	
Herb Stratum (Plot size:		20	V	ODI		
1. Avicennia germinans		30	Yes	OBL	Definitions of Five Vegetation Strata:	
2. Salicornia depressa		70	Yes	OBL	Tree - Woody plants, excluding woody vines,	
3. Salicornia bigelovii		15	No	OBL	approximately 20 ft (6m) or more in height and 3 in.	
4					(7.6 cm) or larger in diameter at breast height (DBH).	
5					Continue Washington and Indian was discussed	
6					Sapling - Woody plants, excluding woody vines,	
7					approximately 20 ft (6 m) or more in height and less	
8			<u> </u>		than 3 in. (7.6 cm) DBH.	
9			. <u>— </u>			
10			<u> </u>		Shrub - Woody plants, excluding woody vines,	
11			. <u> </u>		approximately 3 to 20 ft (1 to 6 m) in height.	
		115	= Total Cover			
	50% of total cover:	57.5	20% of total cover:	23	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:	30 ft)				herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2					3 ft (1 m) in height.	
3.				_		
4.			·		Woody vine - All woody vines, regardless of height.	
5.			· <u></u>			i
		0	= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes <u>X</u> No	
Remarks: (if observed, list me	orphological adaptat	ione below	١			
itemarks. (ii observed, list m	orpriological adaptat	ions below).			
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	species index	ked as OBL, FACW, or FAC).	
A positive indication of hydrop	hytic vegetation was	observed	(Prevalence Index is	$s \le 3.00$).		

	Matrix	to the dep	iii iieeueu to dot		eatures	ommin the abs	ence of indicators.)	
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-20	10GY 5/1	90					Clay	romano
0-20	5PB 4/1	10					Clay	
0-20							Olay	
					-			
1Tumor C=C	anaphratian D=Dan		Doduced Metrix		d Cond Crains	2l costion: D		·
	oncentration, D=Dep s Indicators: (Appli					Location: P	L=Pore Lining, M=Matri	x. ematic Hydric Soils ³ :
-		icable to all			-	DD C T III		<u> </u>
Histoso	, ,				Surface (S8) (L		1 cm Muck (A9)	•
	Epipedon (A2)				e (S9) (LRR S ,	· ·	2 cm Muck (A10	
	listic (A3)				neral (F1) (LRR	0)		(F18) (outside MLRA 150A,E
	en Sulfide (A4)			/ Gleyed Ma	, ,			plain Soils (F19) (LRR P, S, T
	ed Layers (A5)		Deple	ted Matrix (F3)		Anomalous Brig	ht Loamy Soils (F20)
	Bodies (A6) (LRR I			Dark Surfa	ace (F6)		(MLRA 153B)	
5 cm M	lucky Mineral (A7) (L	.RR P, T, U)	Deple	ted Dark Su	ırface (F7)		Red Parent Mat	erial (TF2)
Muck P	Presence (A8) (LRR I	U)	Redox	Depressio	ns (F8)		Very Shallow Da	ark Surface (TF12)
1 cm M	luck (A9) (LRR P, T)		Marl (F10) (LRR	U)		Other (Explain i	n Remarks)
Deplete	ed Below Dark Surface	ce (A11)	Deple	ted Ochric (F11) (MLRA 1	51)		
Thick D	Oark Surface (A12)		Iron-M	langanese	Masses (F12)	LRR O, P, T)	³ Indicators of	hydrophytic vegetation and
Coast F	Prairie Redox (A16) (MLRA 150	A) Umbri	c Surface (F13) (LRR P, T	, U)	•	ology must be present,
Sandy I	Mucky Mineral (S1) (LRR O, S)	Delta	Ochric (F17) (MLRA 151)		unless disturb	ped or problematic.
	Gleyed Matrix (S4)	, ,		•	, (MLRA 15	0A. 150B)		
	Redox (S5)				ain Soils (F19)			
	d Matrix (S6)			-	, ,	-	A, 153C, 153D)	
	urface (S7) (LRR P ,	S T III		alous Brigin	Learny cons (20) (MEIOT 140	, 1000, 100 <i>D</i>)	
Bank or	undoc (O7) (ERRY),	0, 1, 0,						
Restrictive	Layer (if observed)	:						
Type:						Hydrid	Soil Present? Yes	X No
Type:						- Injune		<u> </u>
	iches):							
Depth (in								
Depth (in	ches):		ved					
Depth (in			ved.					
Depth (in	ches):		ved.					
Depth (in	ches):		ved.					
Depth (in	ches):		ved.					
Depth (in	ches):		ved.					
Depth (in	ches):		ved.					
Depth (in	ches):		ved.					
Depth (in	ches):		ved.					
Depth (in	ches):		ved.					
Depth (in	ches):		ved.					
Depth (in	ches):		ved.					
Depth (in	ches):		ved.					
Depth (in	ches):		ved.					
Depth (in	ches):		ved.					
Depth (in	ches):		ved.					
Depth (in	ches):		ved.					
Depth (in	ches):		ved.					
Depth (in	ches):		ved.					
Depth (in	ches):		ved.					
Depth (in	ches):		ved.					

Project/Site:		Bluewater SPM		County:	Nueces	Sampling	Date: Fe	ebruary 5, 2019
Applicant/Owner:		Lloyd Engi	ineerina	Sta			Point:	•
Investigator(s):		and	N. Trivino	Section, Township		'	N/A	
Landform (hillslope, ter			altwater	Local relief (cond	ave, convex, no	one): None	Slope (%):	0-5
Subregion (LRR or ML			ie	Lat:27.8	378575 Lo	ong: -97.09731	0 Datum	: North American Datum 1983
Soil Map Unit Name:		ljar	n clay loam, rarely t	flooded		NWI Classification:	·	N/A
Are climatic / hydrologi	c conditions on	the site typical for	this time of year?	(Yes / No)	YES	_(if no, explain in Re	marks.)	
Are Vegetation	No,Soil	No ,or Hydrolo	gy No signi	ificantly disturbed?	Are "Normal C	Circumstances" prese	nt? Yes	X No
Are Vegetation	No,Soil	No ,or Hydrolo	gy <u>No</u> natui	rally problematic?	(If n	eeded, explain any a	inswers in Ren	narks.)
SUMMARY OF F	INDINGS -	Attach site m	nap showing s	sampling poir	nt locations	, transects, im	portant fe	atures, etc.
							<u>-</u>	
Hydrophytic Vegetation	n Present?	Yes	No X					
Hydric Soil Present?	TIT TOSCITE	Yes	No X		oled Area			
Wetland Hydrology P	resent?	Yes	No X	within a We		Yes	No	X
		. 55		-				
Remarks:								
This point was do	termined not to	be within a wetland	d due to the lack of	f all three wetland c	ritoria			
This point was de	erriiried flot to	be within a welland	u due to the lack of	all tillee wetland c	niena.			
HYDROLOGY	l dia ataua.							
Wetland hydrolo						Secondary Indicato	•	f two required)
	•	one is required; che				Surface Soil	, ,	
Surface Wa	` ,	_	Aquatic Faun	, ,				ve Surface (B8)
High Water		_		s (B15) (LRR U)		Drainage Pat		
Saturation		_		lfide Odor (C1)		Moss Trim Li	, ,	
Water Mark	` ,	_		zospheres on Livinç	y Roots(C3)		Water Table (0	32)
Sediment D	eposits (B2)	_	Presence of F	Reduced Iron (C4)		Crayfish Burr	ows (C8)	
Drift Depos	ts (B3)	_	Recent Iron R	Reduction in Tilled S	3oils (C6)	Saturation Vi	sible on Aerial	Imagery (C9)
	r Crust (B4)	_	Thin Muck Su	urface (C7)		Geomorphic	Position (D2)	
Iron Depos		_	Other (Explain	n in Remarks)		Shallow Aqui	tard (D3)	
Inundation	√isible on Aeria	al Imagery (B7)				FAC-Neutral	Test (D5)	
Water-Stair	ned Leaves (B9	9)				Sphagnum m	noss (D8) (LRF	₹ T, U)
Field Observations:								
Surface Water Prese	at? Vas	No X	Depth (inch	nes): N/A				
Water Table Present			Depth (inch Depth (inch	· ——				
Saturation Present?	Yes	No X	' `	nes): >20 nes): >20	Wetland Hyd	Irology Present?	Yes	No X
(includes capillary frin		NoX	Depti (inci		vvettaria riya	nology i resent:	163	_ 110
Describe Recorde	d Data (stream	n gauge, monitoring	well, aerial photos,	, previous inspection	ons), if available:			
	•	3 3 7 3	, ,	, ,	,,			
Remarks:								
								ļ
No positive indica	ion of wetland	hydrology was obs	erved.					

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft \	% cover	Species?	Status	Number of Dominant Species	
4 44 64 4			Оресіез:	Otatus	·	/A\
					That Are OBL, FACW, or FAC:	(A)
2						
3					Total Number of Dominant	
4					Species Across All Strata: 0	(B)
5						
6					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC:	(A/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1. None Observed	·				Total % Cover of: Multiply by:	Ì
2.					OBL species 0 x 1 = 0	
3.				-	FACW species 0 x 2 = 0	_
					FAC species 0 x 3 = 0	_
4			-		· — — — — — — — — — — — — — — — — — — —	_
5						-
6					UPL species	—
			= Total Cover		Column Totals: (A) 0	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = N/A	
1. None Observed						
2.					Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
4.					2 - Dominance Test is >50%	
5.					3 - Prevalence Index is ≤ 3.0 ¹	
					Problematic Hydrophytic Vegetation ¹ (Explain)	
6			T-1-1-0		Problematic Hydrophytic vegetation (Explain)	
			= Total Cover	_	1	
		0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
1. None Observed					Definitions of Five Vegetation Strata:	
2					Tree - Woody plants, excluding woody vines,	
3					approximately 20 ft (6m) or more in height and 3 in.	
4					(7.6 cm) or larger in diameter at breast height (DBH).	
5.						
6.					Sapling - Woody plants, excluding woody vines,	
			-		approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8						
9					Shrub - Woody plants, excluding woody vines,	
10						
11					approximately 3 to 20 ft (1 to 6 m) in height.	
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size	:30 ft)				herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2.					3 ft (1 m) in height.	
3.						
4.					Woody vine - All woody vines, regardless of height.	
						i
5	-		= Total Cavar		Lindrambudia	
			= Total Cover	_	Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes NoX	
Remarks: (if observed, list m	norphological adaptat	ions below).			
No positive indication of buds	anhutia vagatatian uu		d (>EOO/ of dominan	t anasias inda	aved as EAC as dries)	
No positive indication of hydr	opnytic vegetation wa	as observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).	
No vegetation present.						

Depth	Matrix			Redox I	eatures				
inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0								Shovel Restriction	
	oncentration, D=Dep					² Location: P	L=Pore Lining, M=		
lydric Soil	s Indicators: (Appl	icable to	all LRRs, unless ot	herwise n	oted.)			Problematic Hydric Soils ³ :	
Histoso	` '				Surface (S8) (L			(A9) (LRR O)	
Histic E	pipedon (A2)			ark Surfac	(A10) (LRR S)				
	Histic (A3)			Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLI					
· ·	en Sulfide (A4)			Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LF					
	ed Layers (A5)		Deplete	Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20)					
<u> </u>	c Bodies (A6) (LRR			Dark Surf	,		(MLRA 153	BB)	
	lucky Mineral (A7) (L				urface (F7)			t Material (TF2)	
	Presence (A8) (LRR	•		Depression	. ,			ow Dark Surface (TF12)	
	luck (A9) (LRR P, T)			10) (LRR			Other (Exp	lain in Remarks)	
	ed Below Dark Surfa	ce (A11)			(F11) (MLRA 1	•	3		
-	Dark Surface (A12)			0	Masses (F12)		³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
	Prairie Redox (A16)	•			F13) (LRR P, T	U)			
	Mucky Mineral (S1)	(LRR O, S		,	7) (MLRA 151)			•	
	Gleyed Matrix (S4)			,	F18) (MLRA 15	•			
	Redox (S5)			•	lain Soils (F19)	. ,			
	d Matrix (S6)		Anoma	lous Brigh	t Loamy Soils (I	·20) (MLRA 149	9A, 153C, 153D)		
Dark S	urface (S7) (LRR P,	S, I, U)							
Postrictivo	Layer (if observed)								
	,	•							
Type:	Gravel					Livedeia	Coil Duccout?	/aa Na V	
Depth (ir	iches): 0					пуала	, Suil Present?	/es NoX	

No positive indication of hydric soils was observed.

Project/Site:	Bluewater SPM	County:	Nueces	Sampling Date:	February 5, 2019
Applicant/Owner:	Lloyd Engineering	_ ,Stat			•
	iley and N. Trivino	Section, Township	p, Range:	N/A	_
Landform (hillslope, terrace, etc.):		Local relief (conca	ave, convex, none):	None Slope	(%): 0-5
0 ((((((((((((((((((None	_			atum: North American Datum 1983
Soil Map Unit Name:	ljam clay loam, rarely			/I Classification:	N/A
Are climatic / hydrologic conditions	s on the site typical for this time of year?	(Yes / No)	YES (if n	o, explain in Remarks.)	
Are Vegetation No ,So	il No ,or Hydrology No sigr			nstances" present? Yes	X No
Are Vegetation No ,So	il No ,or Hydrology No nati	urally problematic?	(If neede	d, explain any answers in	Remarks.)
SLIMMARY OF EINDING	S - Attach site map showing	sampling poin	t locations tr	neacte important	foatures etc
30MMART OF TINDING	3 - Attach site map showing	Samping poin	Ti locations, tra	insects, important	i reatures, etc.
Hydrophytic Vegetation Present?	? Yes X No	_			
Hydric Soil Present?	Yes <u>X</u> No		led Area		
Wetland Hydrology Present?	Yes <u>X</u> No	within a We	tland?	Yes X No)
Remarks:					
This point was determined to	be within a wetland due to the presence	of all 3 wetland crite	ria.		
HADBOI OCA					
HYDROLOGY Wetland hydrology Indicate	ors:			nondary Indiactors (minimum	um of two required)
			<u>Sec</u>	condary Indicators (minimu Surface Soil Cracks (B	,
	of one is required; check all that apply)	no (P12)		Sparsely Vegetated Co	'
X Surface Water (A1) High Water Table (A2)	Aquatic Fau	ts (B15) (LRR U)		Drainage Patterns (B10	, ,
Saturation (A3)		ulfide Odor (C1)		Moss Trim Lines (B16)	•
Water Marks (B1)	0.1115	izospheres on Living	Roots(C3)	_ Moss Tilli Lilles (BTo) Dry-Season Water Tab	
Sediment Deposits (B2		Reduced Iron (C4)		Crayfish Burrows (C8)	oic (02)
Drift Deposits (B3)	· ——	Reduction in Tilled S	Soils (C6)	Saturation Visible on A	erial Imagery (C9)
Algal Mat or Crust (B4				Geomorphic Position (I	, ,
Iron Deposits (B5)	· —	ain in Remarks)		Shallow Aquitard (D3)	32)
Inundation Visible on A		iii iii iteiliaiks)		FAC-Neutral Test (D5)	
Water-Stained Leaves				Sphagnum moss (D8)	
Water stamed Estives	, (20)			_ opilagilaiii illood (Bo)	(2.00.1)
Field Observations:					
Surface Water Present? Yes	s X No Depth (inc	hes): 2			
	s No X Depth (inc	· ——			
	No X Depth (inc		Wetland Hydrolog	gy Present? Yes	X No
(includes capillary fringe)		, 			
Describe Recorded Data (str	eam gauge, monitoring well, aerial photo	s, previous inspection	ns), if available:		
·					
Remarks:					
A positive indication of wetla	nd hydrology was observed (at least one	primary indicator).			

		Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:	30 ft)	% cover	Species?	Status	Number of Dominant Species
4 44 64 4		70 00 001	Орескоз:	Otatus	
-			·		That Are OBL, FACW, or FAC: (A)
2					Total Number of Descinant
3					Total Number of Dominant
4					Species Across All Strata:1 (B)
5					
6					Percent of Dominant Species
		0	= Total Cover		That Are OBL, FACW, or FAC: 100% (A/B)
	50% of total cover:	0	20% of total cover:	0	
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:
1. None Observed					Total % Cover of: Multiply by:
2.					OBL species 60 x 1 = 60
3.					FACW species 10 x 2 = 20
4.					FAC species 0 x 3 = 0
5.					FACU species 0 x 4 = 0
6.					UPL species 0 x 5 = 0
o			= Total Cover		
	E00/ of t-t-1	-		^	Column Totals: (A) (B)
Charle Charles (District	50% of total cover:		20% of total cover:	<u> </u>	Dravalance Index - D/A
Shrub Stratum (Plot size:	30 π.)				Prevalence Index = B/A =1.14
1. None Observed					
2					Hydrophytic Vegetation Indicators:
3					1 - Rapid Test for Hydrophytic Vegetation
4					X 2 - Dominance Test is >50%
5					X 3 - Prevalence Index is ≤ 3.0 ¹
6.					Problematic Hydrophytic Vegetation ¹ (Explain)
	<u>.</u>	0	= Total Cover		
	50% of total cover:		20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must
Herb Stratum (Plot size:					be present, unless disturbed or problematic.
Eleocharis palustris		60	Yes	OBL	Definitions of Five Vegetation Strata:
Axonopus fissifolius		10	No	FACW	Tree - Woody plants, excluding woody vines,
				TACV	
3.					approximately 20 ft (6m) or more in height and 3 in.
4					(7.6 cm) or larger in diameter at breast height (DBH).
5					Sapling - Woody plants, excluding woody vines,
6					
7					approximately 20 ft (6 m) or more in height and less
8					than 3 in. (7.6 cm) DBH.
9					
10					Shrub - Woody plants, excluding woody vines,
11					approximately 3 to 20 ft (1 to 6 m) in height.
	_	70	= Total Cover	_	
	50% of total cover:	35	20% of total cover:	14	Herb - All herbaceous (non-woody) plants, including
Woody Vine Stratum (Plot size:	30 ft.)				herbaceous vines, regardless of size, and woody
1. None Observed					plants, except woody vines, less than approximately
2.					3 ft (1 m) in height.
3.					
					Woody vine - All woody vines, regardless of height.
4	<u>'</u>				, , ,
5			= Total Cover		Hydrophytic
	500/ - 54-4-1			0	
	50% of total cover:	0	20% of total cover:	0	Vegetation
					Present? Yes <u>X</u> No
Remarks: (if observed, list mo	orphological adaptat	ions below).		
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	species index	xed as OBL, FACW, or FAC).
A positive indication of had	butio vogototion ···-	oboce is -	(Provolones Inde:::	2 2 00/	
A positive indication of hydrop	nyuc vegetation was	Daviasao	(Frevalence Index I	s ≥ 3.00).	

Depth	Matrix			Redox F	eatures						
inches)	Color (moist)	_%_	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks			
0-3	2.5Y 5/1	100	None				Sandy Loam				
3-20	N 4	98	10YR 5/4	_2_	C	PL	Sandy Loam				
Type: C=C	Concentration, D=De	pletion, RM	l=Reduced Matrix, M	IS=Masked	Sand Grains.	² Location: P	L=Pore Lining, M=Matrix	<u>.</u> ζ.			
Hydric Soil	s Indicators: (Appl	icable to a	all LRRs, unless ot	herwise no	oted.)		Indicators for Proble	ematic Hydric Soils ³ :			
Histoso	ol (A1)		Polyval	ue Below S	Surface (S8) (L	RR S, T, U)	1 cm Muck (A9)	(LRR O)			
Histic E	Epipedon (A2)		Thin Da	ark Surface	(S9) (LRR S,	T, U)	2 cm Muck (A10) (LRR S)			
Black Histic (A3) Loamy Mucky Mineral (F1) (LRR (Reduced Vertic	(F18) (outside MLRA 150A,B			
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)							Piedmont Floodplain Soils (F19) (LRR P, S, T)				
	ed Layers (A5)		Deplete	ed Matrix (F	3)		Anomalous Brigh	nt 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 Mate	erial (TF2)			
Muck Presence (A8) (LRR U) Redox Depressions (F8)							Very Shallow Da	rk Surface (TF12)			
1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U)							Other (Explain in	n Remarks)			
Deplet	ed Below Dark Surfa	ice (A11)	Deplete	ed Ochric (I	=11) (MLRA 1	51)	2				
	Dark Surface (A12)			•	lasses (F12)	, , ,	, P, T) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present,				
	Prairie Redox (A16)	•	· —	•	13) (LRR P, T	, U)	unless disturbed or problematic.				
Sandy	Mucky Mineral (S1)	(LRR O, S		` '	(MLRA 151)		·				
	Gleyed Matrix (S4)			,	18) (MLRA 15	•	•				
X Sandy	Redox (S5)			•	, ,	(MLRA 149A)					
	ed Matrix (S6)		Anoma	lous Bright	Loamy Soils (=20) (MLRA 14 9	9A, 153C, 153D)				
Dark S	urface (S7) (LRR P,	S, T, U)									
Restrictive	Layer (if observed)):									
Type:											
Depth (ir	nches):					Hydrid	Soil Present? Yes _	No			
Remarks:											
۸		:1									
A positive in	idication of hydric so	ii was obse	ervea.								

Project/Site:	Bluewater SPM	County:	Nueces	Sampling Date:	February 5, 2019		
Applicant/Owner:	Lloyd Engineering	Stat			•		
	ley and N. Trivino	Section, Township	o, Range:	 N/A	<u>-</u>		
Landform (hillslope, terrace, etc.):		Local relief (conca	ave, convex, none):	None Slope	(%): 0-5		
0 ' (100 14104)	None	_ \ Lat: 27.8			atum: North American Datum 1983		
Soil Map Unit Name:	ljam clay loam, rarely	flooded		VI Classification:	N/A		
Are climatic / hydrologic conditions	on the site typical for this time of year?	(Yes / No)	YES (if r	no, explain in Remarks.)			
Are Vegetation No ,Soil	l No ,or Hydrology No sign			mstances" present? Yes	x No		
Are Vegetation No ,Soil	No ,or Hydrology No natu	urally problematic?	(If neede	ed, explain any answers in	Remarks.)		
SHMMARY OF FINDINGS	S - Attach site map showing	campling poin	t locations tr	aneocte important	t foatures etc		
30MMART OF FINDING	3 - Attach site map showing		it locations, tr	ansects, important	i leatures, etc.		
Hydrophytic Vegetation Present?	Yes <u>X</u> No	_					
Hydric Soil Present?	Yes <u>X</u> No		led Area				
Wetland Hydrology Present?	Yes <u>X</u> No	_ within a We	tland?	Yes X No)		
Remarks:							
This point was determined to HYDROLOGY	be within a wetland due to the presence	of all 3 wetland crite	ria.				
Wetland hydrology Indicato	ors:		Se	condary Indicators (minimu	um of two required)		
Primary Indicators (minimum	of one is required; check all that apply)			Surface Soil Cracks (B			
X Surface Water (A1)	Aquatic Faur	na (B13)		 Sparsely Vegetated Co 	,		
High Water Table (A2)		s (B15) (LRR U)		Drainage Patterns (B1)	, ,		
Saturation (A3)		ulfide Odor (C1) Moss Trim Lines (B16)					
Water Marks (B1)		zospheres on Living	Roots(C3)	Dry-Season Water Tal			
Sediment Deposits (B2		Reduced Iron (C4)	` ′ _	Crayfish Burrows (C8)	,		
Drift Deposits (B3)	· —	Reduction in Tilled S	oils (C6)	Saturation Visible on A	erial Imagery (C9)		
Algal Mat or Crust (B4)	Thin Muck S	urface (C7)	· · ·	Geomorphic Position (I	D2)		
Iron Deposits (B5)		in in Remarks)		Shallow Aquitard (D3)	,		
Inundation Visible on A	erial Imagery (B7)	,	x	FAC-Neutral Test (D5)			
Water-Stained Leaves	= - , ,			Sphagnum moss (D8)			
	. ,			_ , , ,			
Field Observations:							
Surface Water Present? Yes	X No Depth (inch	hes): 2					
Water Table Present? Yes	NoX Depth (inch	hes): >20					
Saturation Present? Yes	NoX Depth (inch	hes): >20	Wetland Hydrolo	gy Present? Yes	X No		
(includes capillary fringe)							
Describe Recorded Data (stre	eam gauge, monitoring well, aerial photos	s, previous inspection	ns), if available:				
Remarks:							
A positive indication of wetlan	d hydrology was observed (at least one լ	primary indicator).					

Sampling Point:	DPB058_PEM

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft.)	% cover	Species?	Status	Number of Dominant Species	
4. Name Observed		70 00 70.	<u> </u>	<u> </u>	That Are OBL, FACW, or FAC:1	(A)
2.						(* ')
3.					Total Number of Dominant	
4.						(B)
5.					Species / is/ese / iii etiala.	
6.					Percent of Dominant Species	
0			= Total Cover		•	(A/B)
	50% of total cover:		20% of total cover:	0	mat Are OBL, I AOW, OF AC.	(~,0)
Sanling Stratum (Plat size:			20 % of total cover.		Prevalence Index Worksheet:	
Sapling Stratum (Plot size: 1. None Observed	30 ft.)					
2					OBL species 60 x 1 = 60	
3					FACW species 10 x 2 = 20	
4					FAC species	_
5					FACU species 0 x 4 = 0	_
6					UPL species	—
			= Total Cover		Column Totals: (A) 80	(B)
		0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = 1.14	
2					Hydrophytic Vegetation Indicators:	
3					1 - Rapid Test for Hydrophytic Vegetation	
4					X 2 - Dominance Test is >50%	
5					X 3 - Prevalence Index is ≤ 3.0 ¹	
6					Problematic Hydrophytic Vegetation ¹ (Explain)	
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)		•		be present, unless disturbed or problematic.	
Eleocharis palustris	·	60	Yes	OBL	Definitions of Five Vegetation Strata:	
2. Axonopus fissifolius		10	No	FACW	Tree - Woody plants, excluding woody vines,	
3.					approximately 20 ft (6m) or more in height and 3 in.	
4.					(7.6 cm) or larger in diameter at breast height (DBH).	
5.					(1.10 stri) striatiget in diameter at steast height (22.1).	
6.					Sapling - Woody plants, excluding woody vines,	
					approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8					, ,	
9					Shrub - Woody plants, excluding woody vines,	
10					approximately 3 to 20 ft (1 to 6 m) in height.	
11		70			====================================	
	F00/ - £1-1-1		= Total Cover	4.4	Herb - All herbaceous (non-woody) plants, including	
Marchalfor Otratam (District	50% of total cover:		20% of total cover:	14	herbaceous vines, regardless of size, <u>and</u> woody	
Woody Vine Stratum (Plot size:	30 π)				plants, except woody vines, less than approximately	
1. None Observed					3 ft (1 m) in height.	
2					o is (1 m) in noight.	
3					Mandusine All woods vince regardless of beight	
4					Woody vine - All woody vines, regardless of height.	-
5						
		0	= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes <u>X</u> No	
Remarks: (if observed, list mo	orphological adaptati	ons below).			
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	species index	xed as OBL, FACW, or FAC).	
, , , , , , , , , , , , , , , , , , , ,	, ,		(•	- , - , , - , , , , , , , , , , , , , ,	
A positive indication of hydrop	hytic vegetation was	observed	(Prevalence Index is	s ≤ 3.00).		
. p = = =ydiop	, g		,	,-		

Depth	Matrix			Redox F	eatures					
inches)	Color (moist)	%	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks		
0-3	2.5Y 5/1	100	None				Sandy Loam			
3-20	N 4	_98_	10YR 5/4	_2_	C	PL	Sandy Loam			
						2				
	Concentration, D=De					*Location: F	PL=Pore Lining, M=Matrix	•		
•	s Indicators: (Appl	icable to a	•		•	DD C T III		ematic Hydric Soils ³ :		
Histoso	` '				Surface (S8) (L	· · · · · ·	1 cm Muck (A9)			
	Epipedon (A2)				e (S9) (LRR S,		· · · · · · · · · · · · · · · · · · ·			
	Histic (A3)			-	neral (F1) (LRR	. 0)	Reduced Vertic (F18) (outside MLRA 150A,			
	gen Sulfide (A4) ed Layers (A5)			Gleyed Ma ed Matrix (l			Piedmont Floodplain Soils (F19) (LRR P, S,			
	c Bodies (A6) (LRR	D T II\		Dark Surfa	,		Anomalous Bright Loamy Soils (F20)			
	lucky Mineral (A7) (L			ed Dark Su			(MLRA 153B) Red Parent Material (TF2)			
	Presence (A8) (LRR		<i></i> '	Depressio	, ,		Very Shallow Dark Surface (TF12)			
	fuck (A9) (LRR P, T	•		10) (LRR I	` '		Other (Explain in Remarks)			
	ed Below Dark Surfa				F11) (MLRA 1 8	51)	Other (Explain ii	i i temarka)		
	Dark Surface (A12)	100 (7111)			Masses (F12) (³ Indicators of	hydrophytic vegetation and		
	Prairie Redox (A16)	(MI RA 150		-	=13) (LRR P, T			logy must be present,		
	Mucky Mineral (S1)) (MLRA 151)	, 0,	unless disturb	ed or problematic.		
	Gleyed Matrix (S4)	(LIXIX 0, 0)		•	7 (MLRA 151) F18) (MLRA 15	0A 150B)				
	Redox (S5)			,	ain Soils (F19)	· ·				
	ed Matrix (S6)			-		-	9A, 153C, 153D)			
	urface (S7) (LRR P,	S. T. U)		nodo Brigin	Learny cone (i	20) (III 21 0 1 1 -	ort, 1000, 100D,			
Bain 0	unaco (c/) (211117 ,	0, 1, 0,								
Restrictive	Layer (if observed)):								
Type:										
	nches):					Hydri	Hydric Soil Present? Yes X No			
	,					1	_			
Remarks:										
A positive in	dication of hydric so	il was obse	rved.							
•	•									

Project/Site:		Bluewater SPM		County:	Nueces	Sampling	Date: Fe	ebruary 5, 2019
Applicant/Owner:		Lloyd Engi	neering	Sta			Point:	•
Investigator(s):		and	N. Trivino	Section, Townshi		<u> </u>	N/A	
Landform (hillslope, ter			ıltwater	Local relief (conc	ave, convex, no	ne): None	Slope (%):	0-5
Subregion (LRR or ML			e	Lat:27.8	378791 Lo	ong: -97.09752	9 Datum	: North American Datum 1983
Soil Map Unit Name:		ljan	n clay loam, rarely f	flooded		NWI Classification:		N/A
Are climatic / hydrologi	c conditions on	the site typical for t	this time of year?	(Yes / No)	YES	_(if no, explain in Re	marks.)	
Are Vegetation	No,Soil	No ,or Hydrolog	gy No signit	ficantly disturbed?	Are "Normal C	ircumstances" prese	nt? Yes	X No
Are Vegetation	No ,Soil	No ,or Hydrolog	gy <u>No</u> natur	rally problematic?	(If n	eeded, explain any a	nswers in Ren	narks.)
SUMMARY OF F	INDINGS -	- Attach site m	ap showing s	sampling poir	nt locations	, transects, im	portant fe	atures, etc.
							<u> </u>	
Hydrophytic Vegetation	n Present?	Yes	No X					
Hydric Soil Present?	TIT TOSCITE	Yes	No X		oled Area			
Wetland Hydrology P	resent?	Yes	No X	within a We		Yes	No	X
Trouble try are logy t		. 55						
Remarks:				•				
This point was de	termined not to	be within a wetland	due to the lack of	all three wetland o	riteria			
This point was de	ermined not to	be willin a welland	due to the lack of	all tillee wetland ci	ileria.			
HYDROLOGY								
Wetland hydrolo						Secondary Indicato		f two required)
		one is required; che				Surface Soil	, ,	
Surface Wa	` ,	_	Aquatic Fauna	, ,				ve Surface (B8)
	Table (A2)	_		(B15) (LRR U)		Drainage Pat		
Saturation		_		fide Odor (C1)		Moss Trim Li	, ,	
Water Mark	, ,	_		ospheres on Living	Roots(C3)		Water Table (0	22)
Sediment D	eposits (B2)	_	Presence of F	Reduced Iron (C4)		Crayfish Burr	ows (C8)	
Drift Depos	its (B3)	_	Recent Iron R	leduction in Tilled S	Soils (C6)	Saturation Vi	sible on Aerial	Imagery (C9)
Algal Mat o	r Crust (B4)	_	Thin Muck Su	ırface (C7)		Geomorphic	Position (D2)	
Iron Depos	ts (B5)	_	Other (Explain	n in Remarks)		Shallow Aqui	tard (D3)	
Inundation	√isible on Aeria	al Imagery (B7)				FAC-Neutral	Test (D5)	
Water-Stail	ned Leaves (B9	9)				Sphagnum m	noss (D8) (LRF	₹ T, U)
=:					<u> </u>			
Field Observations:		., .,	5 " " 1					
Surface Water Prese			Depth (inch	<i>'</i>				
Water Table Present		NoX	' `	·	NA/-41		W	N. V
Saturation Present? (includes capillary frir	Yes	NoX	Depth (inch	es): >20	wetiand Hyd	Irology Present?	Yes	_ NoX
` ' '		n gauge, monitoring	well_aerial photos	nrevious inspectio	ns) if available:			
Describe recorde	a Data (Stream	r gaage, morntoning	well, derial priotos,	previous inspectio	rio), ii available.			
Remarks:								
No positive indica	tion of wetland	hydrology was obse	erved.					

		Absolute	Dominant	Indicator	Dominance Test wo	rksheet:			
Tree Stratum (Plot size:	30 ft \	% cover		Status	Number of Dominant	Snacias			
1 Name Observed		70 00101	Орескоз:		That Are OBL, FACW	•		0	(Δ)
					That Are Obc, I AOV	, 01170			(八)
2					Total Number of Dem	inant			
3					Total Number of Dom			^	(D)
4					Species Across All St		<u> </u>	0	(B)
5					D	S			
6			- T-t-1 C		Percent of Dominant S	•		^	(A/D)
	500/ 5/ / /		= Total Cover		That Are OBL, FACW	, or FAC: _		<u> </u>	(A/B)
	50% of total cover:	0	20% of total cover:		Prevalence Index We	arkehoot:			
Sapling Stratum (Plot size:	30 ft.)								
					Total % Cov	-		Multiply by:	
2					OBL species		x 1 =	0	
3					FACW species			0	
4					FAC species		x 3 =	0	
5					FACU species		x 4 =	0	
6					UPL species	0	x 5 =	0	
			= Total Cover		Column Totals:	0	(A)	0	(B)
		0	20% of total cover:	0					
Shrub Stratum (Plot size:	30 ft.)				Prevalence I	ndex = B/A =		N/A	
•									
2					Hydrophytic Vegetat	ion Indicator	rs:		
3					1 - Rapid Tes	st for Hydroph	ytic Vege	etation	
4					2 - Dominano				
5					3 - Prevalenc				
6			<u> </u>		Problematic I	Hydrophytic V	egetation	n ¹ (Explain)	
		0	= Total Cover						
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric	soil and wetla	nd hydro	logy must	
Herb Stratum (Plot size:	30 ft.)				be present, unless dis	turbed or prol	olematic.		
1. None Observed					Definitions of Five V	egetation St	rata:		
2					Tree - Woody plants,	excluding wo	ody vine	s,	
3					approximately 20 ft (6	m) or more in	height a	nd 3 in.	
4					(7.6 cm) or larger in d	iameter at bre	ast heigh	ht (DBH).	
5									
6					Sapling - Woody plar	nts, excluding	woody v	ines,	
7					approximately 20 ft (6	m) or more in	n height a	and less	
8.					than 3 in. (7.6 cm) DB	H.			
9.									
10.					Shrub - Woody plants	_	-	es,	
11.					approximately 3 to 20	ft (1 to 6 m) i	n height.		
		0	= Total Cover						
	50% of total cover:	0	20% of total cover:	0	Herb - All herbaceous	(non-woody)	plants, ii	ncluding	
Woody Vine Stratum (Plot size:	30 ft.)		=		herbaceous vines, reg	ardless of siz	e, <u>and</u> w	oody	
1. None Observed					plants, except woody	vines, less tha	an appro	ximately	
2.			<u> </u>		3 ft (1 m) in height.				
3.			<u> </u>						
4.					Woody vine - All woo	dy vines, rega	ardless o	of height.	
5.				-					
		0	= Total Cover		Hydrophytic				
	50% of total cover:		20% of total cover:	0	Vegetation				
					_	s	No 2	x	
					110001111	·			
Remarks: (if observed, list mo	rnhological adaptati	ione helow	1						
•			,						
No positive indication of hydro	phytic vegetation wa	as observe	ed (≥50% of dominan	it species ind	exed as FAC- or drier).				
No vegetation present.									

Depth	Matrix		Redox F	eatures						
inches)	Color (moist) %	Color (moist)	%_	Type ¹	Loc ²	Texture	Remarks			
0							Shovel Restriction			
					21					
	ncentration, D=Depletion, RN				Location: Pl	L=Pore Lining, M=Ma				
•	Indicators: (Applicable to a	•		,	DD C T III		oblematic Hydric Soils ³ :			
Histosol	,			Surface (S8) (L e (S9) (LRR S , '	· · · · · · · ·	1 cm Muck (A 2 cm Muck (A	,			
	oipedon (A2)			e (39) (LRR 3, eral (F1) (LRR	• •		tic (F18) (outside MLRA 150 .			
Black His	n Sulfide (A4)		Gleyed Ma	` , `	0,		odplain Soils (F19) (LRR P, S			
	I Layers (A5)		ed Matrix (F	` ,		Anomalous Bright Loamy Soils (F20)				
-	Bodies (A6) (LRR P, T, U)		Dark Surfa	,		(MLRA 153B	• • • • • • • • • • • • • • • • • • • •			
·	cky Mineral (A7) (LRR P, T, I		ed Dark Su	. ,		Red Parent N	•			
	esence (A8) (LRR U)		Depression				Dark Surface (TF12)			
	ck (A9) (LRR P, T)		=10) (LRR (` ,			in in Remarks)			
	Below Dark Surface (A11)		, ,	-, F11) (MLRA 15	51)		······································			
—— · Thick Da	ark Surface (A12)	Iron-M	anganese N	/\ //asses (F12) (LRR O, P, T)	³ Indicators	of hydrophytic vegetation and			
 Coast Pr	rairie Redox (A16) (MLRA 15	OA) Umbri	c Surface (F	13) (LRR P, T ,	U) wetland hydrology must be present,					
Sandy M	lucky Mineral (S1) (LRR O, S) Delta	Ochric (F17) (MLRA 151)		unless dist	urbed or problematic.			
Sandy G	leyed Matrix (S4)	Reduc	ed Vertic (F	18) (MLRA 15	0A, 150B)					
Sandy R	edox (S5)	Piedm	ont Floodpla	ain Soils (F19)	(MLRA 149A)					
Stripped	Matrix (S6)	Anoma	alous Bright	Loamy Soils (F	20) (MLRA 149	9A, 153C, 153D)				
Dark Sur	rface (S7) (LRR P, S, T, U)									
Restrictive L	ayer (if observed):									
Type:	Gravel									
Depth (inc					Hydric	Soil Present? Ye	s No X			

Project/Site:	Bluewater SPM	C	ounty:	Aransas		Sampling Da	ite: F	ebruary 7, 2019
Applicant/Owner:	Lloyd Engineerin		Stat	:e:	Texas	Sample Poir		•
• • • • • • • • • • • • • • • • • • • •	Bailey and N.	Trivino S	ection, Township	o, Range:		<u> </u>	N/A	
Landform (hillslope, terrace, etc.			ocal relief (conca	ave, convex,	none):	Convex	Slope (%):	0-5
Outro di manifestati (LDD estati DA)	None		Lat: 27.8		Long:			I: North American Datum 1983
Soil Map Unit Name:		Beaches			NWI CI	lassification:		M2USP
Are climatic / hydrologic conditio	ns on the site typical for this tin	ne of year? ((Yes / No)	YES	(if no, e	xplain in Rema	rks.)	
Are Vegetation No ,S	Soil No , or Hydrology	No significa	antly disturbed?	Are "Norma	al Circumsta	inces" present?	Yes	X No
Are Vegetation No ,S	Soil No , or Hydrology	No naturally	y problematic?	(1	lf needed, e	xplain any ans	wers in Re	marks.)
SUMMARY OF FINDING	GS - Attach site map s	showing sa	mplina poin	t locatio	ns. trans	ects. impo	rtant fe	atures, etc.
			1 31 -					
Hydrophytic Vegetation Presen		o <u>X</u>						
Hydric Soil Present?		o <u>X</u>	Is the Samp			_		v
Wetland Hydrology Present?	Yes <u>X</u> N	lo	within a We	tiana?	Ye	es	No	X
Remarks:								
	not to be within a wetland due t	to the lack of hyd	drophytic vegeta	tion and hydi	ric soils.			
HYDROLOGY								
Wetland hydrology Indica								of two required)
	m of one is required; check all t	,				Surface Soil Cra	, ,	
Surface Water (A1)		Aquatic Fauna (E	•			. , ,		ve Surface (B8)
High Water Table (A	· —	Marl Deposits (B				Orainage Patter		
Saturation (A3)		Hydrogen Sulfide	<u>—</u>					
Water Marks (B1)		-	pheres on Living	Roots(C3)		-		C2)
Sediment Deposits (I	· —	Presence of Red				Crayfish Burrow	, ,	
X Drift Deposits (B3)			uction in Tilled S	oils (C6)		Saturation Visib		I Imagery (C9)
Algal Mat or Crust (B	· —	hin Muck Surfa				Seomorphic Pos		
Iron Deposits (B5)		Other (Explain in	Remarks)			Shallow Aquitar		
Inundation Visible on	, ,					AC-Neutral Te		···
Water-Stained Leave	es (B9)				— "	Sphagnum mos	s (D8) (LR	R I, U)
Field Observations:								
Surface Water Present? You	es No X	Depth (inches)	: N/A					
	es No X	Depth (inches)						
	es No X	Depth (inches)		Wetland H	lydrology F	Present? Yo	es X	No
(includes capillary fringe)		,						
Describe Recorded Data (s	stream gauge, monitoring well, a	aerial photos, pr	evious inspection	ns), if availab	ole:			
Remarks:								
A positive indication of wetl	land hydrology was observed (a	at least one prim	nary indicator).					

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft \	% cover	Species?	Status	Number of Dominant Species	
4 44 64 4			Оресіез:	Otatus	•	(A)
					That Are OBL, FACW, or FAC:	(A)
2						
3					Total Number of Dominant	
4					Species Across All Strata: 0	(B)
5						
6					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC:	(A/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1. None Observed					Total % Cover of: Multiply by:	
2.					OBL species 0 x 1 = 0	
3.					FACW species 0 x 2 = 0	
4.					FAC species 0 x 3 = 0	
5.					FACU species 0 x 4 = 0	
6.					UPL species 0 x 5 = 0	
	-		= Total Cover		Column Totals: 0 (A) 0	(B)
	50% of total cover:		20% of total cover:	0		— (°/
Shrub Stratum (Plot size:			20 % Of total cover.		Prevalence Index = B/A = N/A	
					Prevalence index - B/A - N/A	
1. None Observed						
2					Hydrophytic Vegetation Indicators:	
3					1 - Rapid Test for Hydrophytic Vegetation	
4					2 - Dominance Test is >50%	
5					3 - Prevalence Index is ≤ 3.0¹	
6					Problematic Hydrophytic Vegetation ¹ (Explain)	
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
1. None Observed					Definitions of Five Vegetation Strata:	
2.					Tree - Woody plants, excluding woody vines,	
3.					approximately 20 ft (6m) or more in height and 3 in.	
4.					(7.6 cm) or larger in diameter at breast height (DBH).	
					(7.0 off) of larger in diameter at breast height (BBH).	
5					Sapling - Woody plants, excluding woody vines,	
6					approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8					and to the (1.5 off) BBH.	
9					Shrub - Woody plants, excluding woody vines,	
10						
11					approximately 3 to 20 ft (1 to 6 m) in height.	
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size					herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2					3 ft (1 m) in height.	
3						
4					Woody vine - All woody vines, regardless of height.	
5.						ĺ
		0	= Total Cover		Hydrophytic	
	50% of total cover:		20% of total cover:	0	Vegetation	
	0070 01 10101 00101		2070 01 10101 001011		Present? Yes No X	
					Tresent: TesNOX	
Demarks: (if sheemed list m	arnhalagiaal adaptat	iono bolovi	\			
Remarks: (if observed, list m	iorpriological adaptat	ions below).			
No positive indication of hydr	ophytic vegetation wa	as observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).	
No vegetation present.						
- '						

Depth	Matrix			Redox F	eatures				
inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-20	10YR 8/1	100	None				Sand		
	oncentration, D=Dep					² Location: Pl	L=Pore Lining, M=Matri	•	
•	s Indicators: (Appl	icable to a	•		•			lematic Hydric Soils ³ :	
Histosol (A1)					Surface (S8) (LF	· · · · · · ·	1 cm Muck (A9) (LRR O)		
Histic Epipedon (A2)					e (S9) (LRR S, 1		2 cm Muck (A10) (LRR S)		
Black Histic (A3)					neral (F1) (LRR	O)	Reduced Vertic (F18) (outside MLRA 150A,		
Hydrogen Sulfide (A4)				y Gleyed Ma	, ,		Piedmont Floodplain Soils (F19) (LRR P, S,		
Stratified Layers (A5)				ted Matrix (I	,		Anomalous Bright Loamy Soils (F20)		
Organic Bodies (A6) (LRR P, T, U)				Cark Surfa			(MLRA 153B)		
5 cm Mucky Mineral (A7) (LRR P, T, U)			· — ·	ted Dark Su	` '		Red Parent Material (TF2)		
Muck Presence (A8) (LRR U)				C Depression			Very Shallow Dark Surface (TF12)		
	luck (A9) (LRR P, T)			F10) (LRR I	-		Other (Explain i	n Remarks)	
	ed Below Dark Surfa	ce (A11)	 •	`	F11) (MLRA 15	•	31		
	Dark Surface (A12)			-	Masses (F12) (I		³ Indicators of hydrophytic vegetation and wetland hydrology must be present,		
Coast Prairie Redox (A16) (MLRA 150A)				=13) (LRR P, T,	unless disturbed or problematic.				
	Mucky Mineral (S1)	(LRR O, S)		•	') (MLRA 151)			·	
	Gleyed Matrix (S4)			•	F18) (MLRA 150	•			
	Redox (S5)				ain Soils (F19) (· ·			
	ed Matrix (S6)		Anom	alous Bright	Loamy Soils (F	20) (MLRA 149	9A, 153C, 153D)		
Dark S	urface (S7) (LRR P,	S, T, U)							
Restrictive	Layer (if observed)	:							
Type:	,								
					Hydric	ic Soil Present? Yes No X			
Dopui (iii	Depth (inches):					liyana	COULTESCUE TES NO X		
Remarks:						ļ			
tomarko.									
No positive i	indication of hydric s	oils was ob	served.						

Project/Site:	Bluewater SPM		County:	Aransas	5	Sampling Date:	February 7, 2019
Applicant/Owner:	Lloyd Engine		Sta			Sample Point:	
Investigator(s):	C. Bailey and	N. Trivino	Section, Townshi	p, Range:		N/A	
Landform (hillslope, terrace, e			Local relief (conc	ave, convex,	none): Co	onvex Slope	(%): 0-5
Subregion (LRR or MLRA):	,		Lat: 27.8		·		atum: North American Datum 1983
Soil Map Unit Name:		Beaches	<u> </u>				January 0, 1900
•	litions on the site typical for this	s time of year?	(Yes / No)	YES		ain in Remarks.)	
, ,	,Soil No ,or Hydrology				_ ` ' '	es" present? Yes	X No
	,Soil No ,or Hydrology		lly problematic?			i ain any answers in	
				•	•	-	,
SUMMART OF FINDS	INGS - Attach site ma	p snowing sa	ampling poir	it location	is, transec	its, important	reatures, etc.
Hydrophytic Vegetation Pres	sent? Yes X	No					
Hydric Soil Present?	Yes	No X	Is the Samp	oled Area			
Wetland Hydrology Present	? Yes	No X	within a We	etland?	Yes	No) X
					_		
Remarks:							
This point was determine	ed not to be within a wetland d	lue to the lack of h	ydric soils and we	etland hydrolo	gy.		
111/2201 201/							
HYDROLOGY							
Wetland hydrology Ind	licators:				Secondary	Indicators (minimu	um of two required)
Primary Indicators (minir	mum of one is required; check	all that apply)			Surf	ace Soil Cracks (B	6)
Surface Water (A	1)	_ Aquatic Fauna	(B13)		Spai	rsely Vegetated Co	ncave Surface (B8)
High Water Table	(A2)	_ Marl Deposits (B15) (LRR U)		Drai	nage Patterns (B1))
Saturation (A3)		_ Hydrogen Sulfi	de Odor (C1)		Mos	s Trim Lines (B16)	
Water Marks (B1)		_ Oxidized Rhizo	spheres on Living	Roots(C3)	Dry-	Season Water Tab	ele (C2)
Sediment Deposit	:s (B2)	_ Presence of Re	educed Iron (C4)		Cray	fish Burrows (C8)	
Drift Deposits (B3		Recent Iron Re	duction in Tilled S	Soils (C6)	Satu	ration Visible on A	erial Imagery (C9)
Algal Mat or Crust	t (B4)	Thin Muck Surf	face (C7)		Geo	morphic Position (I	02)
Iron Deposits (B5))	Other (Explain	in Remarks)		Shal	low Aquitard (D3)	
Inundation Visible	on Aerial Imagery (B7)	_			X FAC	-Neutral Test (D5)	
Water-Stained Le	aves (B9)				Sph:	agnum moss (D8)	(LRR T, U)
	, ,					, ,	,
Field Observations:							
Surface Water Present?	Yes No X	Depth (inche	s): N/A				
Water Table Present?	Yes No X	Depth (inche	· ——				
Saturation Present?	Yes No X	_ Depth (inche	<i>'</i> —	Wetland H	ydrology Pre	sent? Yes	No X
(includes capillary fringe)	100 110 <u>X</u>		<u> </u>	Trottana n	ya.o.ogyo.		NOX
	a (stream gauge, monitoring w	ell aerial nhotos r	orevious inspectio	ne) if availah	ـــــــــــــــــــــــــــــــــــــ		
Describe Necorded Data	a (Stream gauge, monitoring w	eli, aeriai priotos, į	orevious irispectio	ilis), ii avallab	ic.		
Damanila.							
Remarks:							
No positive indication of	wetland hydrology was observ	rod					
No positive indication of	wettarid flydrology was observ	reu.					

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft)	% cover	Species?	Status	Number of Dominant Species	
4. None Observed	<u> </u>				That Are OBL, FACW, or FAC:	(A)
2.						('')
3					Total Number of Dominant	
4			·		Species Across All Strata: 1	(B)
5						(_)
6					Percent of Dominant Species	
<u> </u>		0	= Total Cover		That Are OBL, FACW, or FAC: 100%	(A/B)
	50% of total cover:		-	0		(-,-)
Sapling Stratum (Plot size:	30 ft.)		. 2070 01 10101 00701.		Prevalence Index Worksheet:	
1. None Observed	<u> </u>				Total % Cover of: Multiply	hv [.]
						5
3.						90
			· ——)
4	.)
5)
6	<u> </u>		= Total Cover			45 (B)
	50% of total cover:		•	0	Column Totals. 130 (A) 2	+ 3 (D)
Shrub Stratum (Plot size:	50% of total cover:		. 20% of total cover.		Prevalence Index = B/A = 1.63	
1. None Observed	30 ft.)				Prevalence index – B/A – 1.63	
			<u> </u>		Liver postic Veretation Indicators	
2			·		Hydrophytic Vegetation Indicators:	
3.			·		1 - Rapid Test for Hydrophytic Vegetation	
4					X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤ 3.0 ¹	
5						
6			· _ 		Problematic Hydrophytic Vegetation ¹ (Expl	ain)
			= Total Cover	•	1	
	50% of total cover:	0	20% of total cover:	0	Indicators of hydric soil and wetland hydrology mu	st
Herb Stratum (Plot size:	30 ft.)	0.5		0.01	be present, unless disturbed or problematic.	
1. Fimbristylis puberula		25	<u>No</u>	OBL_	Definitions of Five Vegetation Strata:	
2. Juncus nodatus		20	No No	OBL	Tree - Woody plants, excluding woody vines,	
3. Rhynchospora colorata		15	<u>No</u>	<u>FACW</u>	approximately 20 ft (6m) or more in height and 3 in.	
4. Juncus effusus		10	No No	OBL	(7.6 cm) or larger in diameter at breast height (DBH).
5. Andropogon glomeratus		80	Yes	FACW_	Sanling Woody plants, evaluding woody vines	
6			<u> </u>		Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8			· —		than 3 in. (7.0 cm) DBH.	
9					Shrub - Woody plants, excluding woody vines,	
10						
11			<u> </u>		approximately 3 to 20 ft (1 to 6 m) in height.	
			= Total Cover		Have All harbassaus (non woods) plants including	
	50% of total cover:	75	20% of total cover:	30	Herb - All herbaceous (non-woody) plants, including	l
Woody Vine Stratum (Plot size:	30 ft)				herbaceous vines, regardless of size, <u>and</u> woody	
1. None Observed					plants, except woody vines, less than approximately	'
2			· —		3 ft (1 m) in height.	
3					We are the state of the state o	
4			<u> </u>		Woody vine - All woody vines, regardless of height	:
5			<u> </u>			
		0	= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes <u>X</u> No	
Remarks: (if observed, list mo	orphological adaptati	ons below).			
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	snecies inde	xed as OBL_FACW_or FAC)	
- F	,		,	r - 1.00 mao.	, , 5	

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Depth	Matrix			Redox F	eatures					
	olor (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-20	10YR 6/3	95	5YR 4/6	5	С	PL	Sand			
			——————————————————————————————————————			21				
71			=Reduced Matrix, Matri			-Location: PL	=Pore Lining, M=Matrix	ematic Hydric Soils ³ :		
Histosol (A1)		icable to a	-		Surface (S8) (L	RRS T III	1 cm Muck (A9)			
Histic Epiped					e (S9) (LRR S ,		2 cm Muck (A10	•		
Black Histic (` ,				neral (F1) (LRR	• •		F18) (outside MLRA 150A,I		
Hydrogen Su	,			Gleyed Ma	` , `	-,		olain Soils (F19) (LRR P, S, T		
Stratified Lay	ers (A5)			ed Matrix (` ,		Anomalous Brigh	nt Loamy Soils (F20)		
Organic Bodi	es (A6) (LRR I	P, T, U)	Redox	Dark Surfa	ace (F6)		(MLRA 153B) Red Parent Material (TF2) Very Shallow Dark Surface (TF12)			
5 cm Mucky	Mineral (A7) (L	.RR P, T, L	J) Deplete	ed Dark Su	ırface (F7)					
Muck Preser	ce (A8) (LRR	U)	Redox	Depressio	ns (F8)					
1 cm Muck (/	49) (LRR P, T)		Marl (F	10) (LRR	U)		Other (Explain in Remarks)			
Depleted Bel	ow Dark Surfa	ce (A11)	Deplete	ed Ochric (F11) (MLRA 1	51)	_			
Thick Dark S	urface (A12)		Iron-Ma	anganese l	Masses (F12)	(LRR O, P, T)		nydrophytic vegetation and		
	Redox (A16)		<i>'</i> —	,	=13) (LRR P, T	, U)	wetland hydrology must be present, unless disturbed or problematic.			
·	/ Mineral (S1) (LRR O, S		`) (MLRA 151)		amood alotala	ou or problemane.		
Sandy Gleye	` ,			`	18) (MLRA 15					
Sandy Redox	` ,				ain Soils (F19)	. ,	A 4500 450D)			
Stripped Mat	` '	C T II)	Anoma	ious Brign	Loamy Solis (F20) (MLRA 149	A, 153C, 153D)			
Dark Surface	(S7) (LRR P,	3, 1, 0)								
Restrictive Layer	(if observed)	:								
Type:										
Depth (inches)	:					Hydric	Soil Present? Yes _	NoX		
Remarks:										
lo positive indica	tion of hydric so	olis was ob	served.							

Project/Site:	Bluewater SPM	Со	unty:	Aransas	Sam	pling Date:	ebruary 7, 2019
	Lloyd Engineer		State			nple Point:	
	, ,		ection, Township			N/A	
Landform (hillslope, terrace, etc		ter Lo	ocal relief (conca	ve, convex, nor	ne): Conca	ve Slope (%)	: 0-5
Subregion (LRR or MLRA):						 44925 Datur	North American Datum 1983
Soil Map Unit Name:		ments, rarely floode			NWI Classifica		PEM1C
Are climatic / hydrologic condition				YES	if no, explain i		
Are Vegetation No ,S	Soil No ,or Hydrology	No significar	ntly disturbed?	Are "Normal Ci	ircumstances" ¡	oresent? Yes	X No
Are Vegetation No ,S	Soil Yes ,or Hydrology	No naturally	problematic?	(If ne	eeded, explain	any answers in Re	emarks.)
SUMMARY OF FINDIN	GS - Attach site man	showing san	nnling noint	Incations	transacts	important fo	atures etc
- The state of the		Jilowing Juli	inplining point		, transcotts	, important it	
Hydrophytic Vegetation Preser		No					
Hydric Soil Present?		No	Is the Sample	∌d Area			
Wetland Hydrology Present?	YesX	No	within a Wet	and?	Yes	X No	
Remarks:							
·	to be within a wetland due to	the presence of all	3 wetland criter	a. 			
HYDROLOGY Wetland hydrology Indica	atore:						
, ,,		II 41 4 1- 3				icators (minimum	of two required)
	m of one is required; check al		40)			Soil Cracks (B6)	Cf (D0)
X Surface Water (A1) High Water Table (A		Aquatic Fauna (B Marl Deposits (B1				/ Vegetated Conc e Patterns (B10)	ave Surface (B8)
Saturation (A3)		Hydrogen Sulfide				im Lines (B16)	
Water Marks (B1)		Oxidized Rhizosp	, ,	Roote(C3)		son Water Table	(C2)
Sediment Deposits (B2)	Presence of Redu	-	(0013(00)		Burrows (C8)	(02)
Drift Deposits (B3)		Recent Iron Redu		ils (C6)		on Visible on Aeria	al Imagery (C9)
X Algal Mat or Crust (E	34)	Thin Muck Surfac		(00)		phic Position (D2)	, ,
Iron Deposits (B5)		Other (Explain in				Aquitard (D3)	
	n Aerial Imagery (B7)	O (_ x p	· temame,			utral Test (D5)	
Water-Stained Leave						um moss (D8) (LF	R T. U)
	()					(= -) (=-	, -,
Field Observations:							
Surface Water Present? Y	es X No	Depth (inches):	12				
	'es No X	Depth (inches):	>20				
Saturation Present? Y	'es NoX	Depth (inches):	>20	Wetland Hyd	rology Presen	t? Yes X	No
(includes capillary fringe)							
Describe Recorded Data (s	stream gauge, monitoring well	, aerial photos, pre	vious inspection	s), if available:			
Remarks:							
Δ nositive indication of wet	land hydrology was observed	(at least one prima	ary indicator)				
7 positive indication of wet	lana nyarology was observed	(at least one prime	ary maioatory.				
							l

		Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:	30 ft)	% cover	Species?	Status	Number of Dominant Species
4 44 64 4		70 00 001	Орескоз:	Otatus	That Are OBL, FACW, or FAC: 1 (A)
			-		That Ale OBE, I AOW, OI I AO.
2					Total Number of Descinant
3					Total Number of Dominant
4					Species Across All Strata:1 (B)
5					
6					Percent of Dominant Species
		0	= Total Cover		That Are OBL, FACW, or FAC: 100% (A/B)
	50% of total cover:	0	20% of total cover:	0	
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:
1. None Observed					Total % Cover of: Multiply by:
2.			·		OBL species 80 x 1 = 80
3.					FACW species 0 x 2 = 0
4.					FAC species 0 x 3 = 0
5.					FACU species 0 x 4 = 0
6.					UPL species 0 x 5 = 0
0			= Total Cover		Column Totals: 80 (A) 80 (B)
	E00/ of total			0	Coluitiii Totals (A) (B)
Charle Charles (District	50% of total cover:		20% of total cover:	<u> </u>	Dravalance Index - D/A
Shrub Stratum (Plot size:	<u>30 π.</u>)				Prevalence Index = B/A = 1.00
1. None Observed					
2					Hydrophytic Vegetation Indicators:
3					1 - Rapid Test for Hydrophytic Vegetation
4					X 2 - Dominance Test is >50%
5					X 3 - Prevalence Index is ≤ 3.0 ¹
6					Problematic Hydrophytic Vegetation ¹ (Explain)
•		0	= Total Cover		
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must
Herb Stratum (Plot size:					be present, unless disturbed or problematic.
1 0-1	,	80	Yes	OBL	Definitions of Five Vegetation Strata:
					Tree - Woody plants, excluding woody vines,
2.			·		approximately 20 ft (6m) or more in height and 3 in.
3					
4					(7.6 cm) or larger in diameter at breast height (DBH).
5					Sapling - Woody plants, excluding woody vines,
6					
7					approximately 20 ft (6 m) or more in height and less
8					than 3 in. (7.6 cm) DBH.
9					
10					Shrub - Woody plants, excluding woody vines,
11					approximately 3 to 20 ft (1 to 6 m) in height.
		80	= Total Cover		
	50% of total cover:	40	20% of total cover:	16	Herb - All herbaceous (non-woody) plants, including
Woody Vine Stratum (Plot size:	30 ft.)				herbaceous vines, regardless of size, and woody
1. None Observed					plants, except woody vines, less than approximately
2.					3 ft (1 m) in height.
3.					
4.			-	-	Woody vine - All woody vines, regardless of height.
	•				
5			= Total Cover		Hydrophytic
	COO/ -f t-t-l			0	
	50% of total cover:	0	20% of total cover:	0	Vegetation
					Present? Yes <u>X</u> No
Remarks: (if observed, list mo	orphological adaptat	ions below).		
A positive indication of hydrop	hytic vegetation was	s observed	(>50% of dominant	species index	xed as OBL, FACW, or FAC).
A positive indication of hydrop	nytic vegetation was	s observed	(Prevalence Index is	s ≤ 3.00).	

Profile Description: (Describe to the depth need Depth Matrix		Features			•
	or (moist) %	Type ¹	Loc ²	Texture	Remarks
0					Shovel Restriction
¹ Type: C=Concentration, D=Depletion, RM=Redu	ced Matrix, MS=Mask	ed Sand Grains. ²	Location: PL:	=Pore Lining, M=M	atrix.
Hydric Soils Indicators: (Applicable to all LRR	s, unless otherwise	noted.)		Indicators for Pr	oblematic Hydric Soils ³ :
Histosol (A1)	Polyvalue Below	Surface (S8) (LRR	S, T, U)	1 cm Muck (A9) (LRR O)
Histic Epipedon (A2)	Thin Dark Surfa	ce (S9) (LRR S, T, I	J)	2 cm Muck (A10) (LRR S)
Black Histic (A3)	Loamy Mucky M	ineral (F1) (LRR O)		Reduced Ve	rtic (F18) (outside MLRA 150A,E
Hydrogen Sulfide (A4)	Loamy Gleyed N	/latrix (F2)		Piedmont Flo	oodplain Soils (F19) (LRR P, S, T
Stratified Layers (A5)	Depleted Matrix	(F3)		Anomalous E	Bright Loamy Soils (F20)
Organic Bodies (A6) (LRR P, T, U)	Redox Dark Sur	face (F6)		(MLRA 153E	3)
5 cm Mucky Mineral (A7) (LRR P, T, U)	Depleted Dark S	Surface (F7)		Red Parent I	Material (TF2)
Muck Presence (A8) (LRR U)	Redox Depressi	ons (F8)		Very Shallow	Dark Surface (TF12)
1 cm Muck (A9) (LRR P, T)	Marl (F10) (LRR	: U)		X Other (Expla	in in Remarks)
Depleted Below Dark Surface (A11)	Depleted Ochric	(F11) (MLRA 151)			
Thick Dark Surface (A12)	Iron-Manganese	Masses (F12) (LR	R O, P, T)		of hydrophytic vegetation and
Coast Prairie Redox (A16) (MLRA 150A)	Umbric Surface	(F13) (LRR P, T, U)			/drology must be present,
Sandy Mucky Mineral (S1) (LRR O, S)	Delta Ochric (F1	7) (MLRA 151)		unless dis	turbed or problematic.
Sandy Gleyed Matrix (S4)	Reduced Vertic	(F18) (MLRA 150A ,	150B)		
Sandy Redox (S5)	Piedmont Flood	olain Soils (F19) (MI	.RA 149A)		
Stripped Matrix (S6)	Anomalous Brig	ht Loamy Soils (F20	(MLRA 149 <i>A</i>	A, 153C, 153D)	
Dark Surface (S7) (LRR P, S, T, U)					
Restrictive Layer (if observed):					
Type: Deep water					
Depth (inches): 0			Hydric	Soil Present? Ye	es <u>X</u> No
Remarks:					
A positive indication of hydric soil was observed.					
Water too deep to dig; soils assumed hydric.					

Project/Site:	Bluewater SPM	С	county:	Aransas		Sampling Date:	February 7, 2019
Applicant/Owner:	Lloyd Engineer		Stat			Sample Point:	
• • • • • • • • • • • • • • • • • • • •	Bailey and N	N. Trivino S	Section, Township	o, Range:		 N/A	
Landform (hillslope, terrace, etc			ocal relief (conca	ave, convex,	none): C	onvex Slope	(%): 0-5
Outro di manifestati (LDD estati DA)	Т		Lat: 27.8			97.045047 Da	atum: North American Datum 1983
Soil Map Unit Name:	Psamn	nents, rarely flood	ded		NWI Clas	sification:	PEM1C
Are climatic / hydrologic conditi	ons on the site typical for this t	ime of year?	(Yes / No)	YES	(if no, exp	lain in Remarks.)	
Are Vegetation No,	Soil No, or Hydrology	No significa	antly disturbed?	Are "Norma	Circumstanc	es" present? Yes	s <u>X</u> No
Are Vegetation No,	Soil No, or Hydrology	No naturall	y problematic?	(If	needed, exp	lain any answers ir	n Remarks.)
SUMMARY OF FINDIN	IGS - Attach site map	showing sa	mplina poin	t location	s. transe	cts. importan	t features, etc.
			1 31				
Hydrophytic Vegetation Prese		No					
Hydric Soil Present?		No X	Is the Samp		V		
Wetland Hydrology Present?	Yes	No	within a We	tiand?	Yes	N	oX
Remarks:							
This point was determined	d not to be within a wetland due	e to the lack of hy	dric soils and we	tland hydrolo	gy.		
HYDROLOGY Wetland budgelogy India							
Wetland hydrology India						•	um of two required)
	um of one is required; check al					face Soil Cracks (E	•
Surface Water (A1)		Aquatic Fauna (•				oncave Surface (B8)
High Water Table (A	· —	Marl Deposits (E				inage Patterns (B1	•
Saturation (A3)		Hydrogen Sulfid	, ,	D (-(00)		ss Trim Lines (B16	
Water Marks (B1)	(DO)		pheres on Living	Roots(C3)		-Season Water Ta	, ,
Sediment Deposits	(B2)	Presence of Rec		-:I- (OC)		yfish Burrows (C8)	
Drift Deposits (B3)			luction in Tilled S	olis (Cb)			Aerial Imagery (C9)
Algal Mat or Crust (Thin Muck Surfa	, ,			omorphic Position (,
Iron Deposits (B5)		Other (Explain in	n Remarks)			allow Aquitard (D3)	
	on Aerial Imagery (B7)					C-Neutral Test (D5	
Water-Stained Leav	7es (D9)				Зрі	nagnum moss (D8)	(LKK 1, U)
Field Observations:							
Surface Water Present?	Yes No X	Depth (inches): N/A				
	Yes No X	Depth (inches	<i></i>				
Saturation Present?	Yes No X	Depth (inches		Wetland H	ydrology Pre	esent? Yes	No X
(includes capillary fringe)							
Describe Recorded Data ((stream gauge, monitoring well	, aerial photos, pi	revious inspection	ns), if availab	le:		
Remarks:							
Remarks.							
No positive indication of w	vetland hydrology was observed	d.					
'	, 3,						

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
To a Otraction (District	00 (1)		Dominant	Indicator		
Tree Stratum (Plot size:	<u>30 π.</u>)	% cover	Species?	Status	Number of Dominant Species	(4)
			·		That Are OBL, FACW, or FAC: 2	(A)
2						
3					Total Number of Dominant	
4			·		Species Across All Strata: 2	(B)
5			·			
6			. <u> </u>		Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC: 100%	(A/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1. None Observed			. <u>———</u>		Total % Cover of: Multiply by:	<u> </u>
2			. <u> </u>		OBL species 70 x 1 = 70	
3.	<u> </u>				FACW species 40 x 2 = 80	
4.					FAC species 0 x 3 = 0	
5.			· <u></u>		FACU species 0 x 4 = 0	
6.					UPL species 0 x 5 = 0	
			= Total Cover		Column Totals: 110 (A) 150	—— (B)
	50% of total cover-		20% of total cover:	0	(i) 100	(5)
Shrub Stratum (Plot size:			2070 Of total cover.		Prevalence Index = B/A = 1.36	
	<u> </u>				Frevalence index – B/A – 1.30	
1. None Observed			·		Hudronkutia Vanatatian Indiaatana.	
2			·		Hydrophytic Vegetation Indicators:	
3.			<u> </u>		1 - Rapid Test for Hydrophytic Vegetation	
4					X 2 - Dominance Test is >50%	
5			<u> </u>		X 3 - Prevalence Index is ≤ 3.0 ¹	
6			<u> </u>		Problematic Hydrophytic Vegetation ¹ (Explain))
		0	= Total Cover			
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
1. Schoenoplectus pungens		55	Yes	OBL	Definitions of Five Vegetation Strata:	
2. Andropogon glomeratus		20	Yes	FACW	Tree - Woody plants, excluding woody vines,	
3. Setaria parviflora		10	No	FACW	approximately 20 ft (6m) or more in height and 3 in.	
4. Hydrocotyle bonariensis		10	No	FACW	(7.6 cm) or larger in diameter at breast height (DBH).	
5. Borrichia frutescens		15	No	OBL	(* ** * * * * * * * * * * * * * * * * *	
6.	_				Sapling - Woody plants, excluding woody vines,	
					approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8						
9					Shrub - Woody plants, excluding woody vines,	
10					approximately 3 to 20 ft (1 to 6 m) in height.	
11			- -		approximatory o to 20 ft (1 to 0 fff) iff floight.	
		110	= Total Cover		Horb. All horboscous (non-woods) alonto in alle the	
	50% of total cover:	55	20% of total cover:	22	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:	30 ft.)				herbaceous vines, regardless of size, and woody	
1. None Observed			<u> </u>		plants, except woody vines, less than approximately	
2					3 ft (1 m) in height.	
3			. <u> </u>			
4					Woody vine - All woody vines, regardless of height.	
5.						
		0	= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
		-	•		Present? Yes X No	
Remarks: (if observed, list mo	arnhological adaptati	ons halow	١			
·			•			
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	species index	xed as OBL, FACW, or FAC).	

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

epth	Matrix			Redox F	eatures						
nches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0-20	10YR 6/3	_90_	5YR 4/6	_10_	C	PL	Sand				
 Гуре: С=С	Concentration, D=De	oletion, RM	=Reduced Matrix, N	 IS=Masked	Sand Grains.	² Location: PL	=Pore Lining, M=Matrix				
ydric Soil	s Indicators: (App	icable to a	all LRRs, unless ot	herwise ne	oted.)		Indicators for Proble	ematic Hydric Soils ³ :			
Histoso	ol (A1)		Polyva	lue Below S	Surface (S8) (L	RR S, T, U)	1 cm Muck (A9)	(LRR O)			
Histic E	Epipedon (A2)		Thin D	ark Surface	e (S9) (LRR S,	T, U)	2 cm Muck (A10)	(LRR S)			
Black I	Histic (A3)		Loamy	Mucky Min	eral (F1) (LRR	O)	Reduced Vertic (F18) (outside MLRA 150A,			
	gen Sulfide (A4)		Loamy	Gleyed Ma	atrix (F2)			olain Soils (F19) (LRR P, S, 1			
	ed Layers (A5)			ed Matrix (F	,		Anomalous Bright Loamy Soils (F20)				
<u> </u>	c Bodies (A6) (LRR			Dark Surfa	,		(MLRA 153B)				
	fucky Mineral (A7) (I		· — '	ed Dark Su	, ,		Red Parent Mate	,			
Muck Presence (A8) (LRR U) Redox Depressions (F8) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U)							rk Surface (TF12)				
	fluck (A9) (LRR P, T					-4\	Other (Explain in	Remarks)			
	ed Below Dark Surfa	ice (A11)		,	F11) (MLRA 1 9	•	3Indicators of h	nydrophytic vegetation and			
	Dark Surface (A12) Prairie Redox (A16)	/MI DA 15/		•	Masses (F12)(F13) (LRR P, T		wetland hydrology must be present,				
	Mucky Mineral (S1)	•	· —	,) (MLRA 151)	, 0)	unless disturbed or problematic.				
	Gleyed Matrix (S4)	(LIKIK O, O			7 (MLRA 131) 18) (MLRA 15	0A 150B)					
	Redox (S5)				ain Soils (F19)	•					
	ed Matrix (S6)			•	` ,	20) (MLRA 149)	A. 153C. 153D)				
	urface (S7) (LRR P,	S, T, U)		.	(,,,				
	. , ,	,									
estrictive	Layer (if observed)):									
Type:											
Depth (ir	nches):					Hydric	Soil Present? Yes _	NoX			
emarks:											
o positive	indication of hydric s	oils was ob	served.								

Project/Site:	Bluewater SPM	C	County:	Aransas	S	ampling Date:	February 7, 2019
Applicant/Owner:	Lloyd Enginee	ring	Stat	:e:	Texas	Sample Point:	DPA064_U
Investigator(s):	. Bailey and	N. Trivino S	Section, Township	o, Range:		N/A	
Landform (hillslope, terrace, e		L	ocal relief (conca	ave, convex, r	none): Co	onvex Slope (%): 0-5
Subregion (LRR or MLRA):	T		Lat:27.8	54052	Long:9	7.045173 Da	tum: North American Datum 1983
Soil Map Unit Name:		ments, rarely flood			NWI Class	ification:	January 0, 1900
	tions on the site typical for this				_ ` ' '	ain in Remarks.)	
	,Soil No ,or Hydrology		-			s" present? Yes	
Are Vegetation No	,Soil No, or Hydrology	No naturall	ly problematic?	(If	needed, expla	ain any answers in	Remarks.)
SUMMARY OF FINDI	NGS - Attach site map	showing sa	mpling poin	t location	s, transec	ts, important	features, etc.
							1
Hydrophytic Vegetation Pres	ent? Yes X	No					
Hydric Soil Present?	Yes X	No	Is the Samp	led Area			
Wetland Hydrology Present?		No X	within a We		Yes	No	x
Remarks:							
This point was determine	ed not to be within a wetland du	e to the lack of we	etland hydrology				
Triis point was determine	d not to be within a wettand da	e to the lack of we	chana nyarology.				
HYDROLOGY							
Wetland hydrology Indi	icators:				Cocondon	Indicatora (minimu	um of two required)
	num of one is required; check a	II that annly)				ace Soil Cracks (B	ım of two required)
Surface Water (A1	•	Aquatic Fauna (R13)			•	ncave Surface (B8)
High Water Table	· —	Marl Deposits (E	•			nage Patterns (B10	, ,
Saturation (A3)		Hydrogen Sulfid				Trim Lines (B16)	•
Water Marks (B1)			pheres on Living	Roots(C3)		Season Water Tab	
Sediment Deposits		Presence of Red	-	,		fish Burrows (C8)	,
Drift Deposits (B3)	· ·		luction in Tilled S	oils (C6)		, ,	erial Imagery (C9)
Algal Mat or Crust	(B4)	Thin Muck Surfa	ace (C7)		Geor	morphic Position (I	02)
Iron Deposits (B5)	<u> </u>	Other (Explain in	n Remarks)		Shal	ow Aquitard (D3)	
Inundation Visible	on Aerial Imagery (B7)				X FAC	-Neutral Test (D5)	
Water-Stained Lea	aves (B9)				Spha	agnum moss (D8)	(LRR T, U)
				1			
Field Observations:							
	Yes NoX	Depth (inches	<i>'</i>				
	Yes NoX	Depth (inches				40. 14	
Saturation Present? (includes capillary fringe)	Yes NoX	Depth (inches): <u>>20</u>	Wetland H	ydrology Pres	sent? Yes	NoX
	(stream gauge, monitoring wel	L periol photos p	rovious inspection	ne) if availabl	lo:		
Describe Necolded Data	(Stream gauge, monitoring wei	i, aeriai priotos, pi	revious irispectioi	is), ii avallabi			
Remarks:							
No positive indication of	wetland hydrology was observe	ed.					

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft.)	% cover	Species?	Status	Number of Dominant Species	
1 Name Observed	,				•	(A)
2.			·			()
3					Total Number of Dominant	
4			-			(B)
					Species / 101033 / 111 Ottata.	(5)
5.					Percent of Dominant Species	
6		0	= Total Cover		•	(A/B)
	EOO/ of total agreem			0	That Are OBE, I ACW, OIT AC.	(A/D)
Carling Charles (Distains)	50% of total cover:	0	20% of total cover:	0	Prevalence Index Worksheet:	
Sapling Stratum (Plot size:	30 ft.)					
1. None Observed			·		Total % Cover of: Multiply by:	
2.					OBL species <u>20</u> x 1 = <u>20</u>	_
3			· · · · · · · · · · · · · · · · · · ·		FACW species 10 x 2 = 20	
4					FAC species 55 x 3 = 165	
5					FACU species 0 x 4 = 0	
6					UPL species 5 x 5 = 25	
			= Total Cover		Column Totals: (A) 230	(B)
	50% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size:	30 ft.)				Prevalence Index = B/A = 2.56	
1. None Observed						
2					Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
4.					X 2 - Dominance Test is >50%	
5.					X 3 - Prevalence Index is ≤ 3.0 ¹	
6.					Problematic Hydrophytic Vegetation ¹ (Explain)	
		0	= Total Cover			
	50% of total cover:		20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)		2070 Of total cover.		be present, unless disturbed or problematic.	
Hydrocotyle bonariensis		10	No	FACW	Definitions of Five Vegetation Strata:	
Juncus effusus		20	Yes	OBL	Tree - Woody plants, excluding woody vines,	
-		5				
3. Gomphrena serrata			No No	UPL_	approximately 20 ft (6m) or more in height and 3 in.	
4. Andropogon virginicus		55	Yes	FAC	(7.6 cm) or larger in diameter at breast height (DBH).	
5					Sapling - Woody plants, excluding woody vines,	
6					approximately 20 ft (6 m) or more in height and less	
7						
8					than 3 in. (7.6 cm) DBH.	
9			·		Observe Wasselson and State of the Control of the C	
10					Shrub - Woody plants, excluding woody vines,	
11					approximately 3 to 20 ft (1 to 6 m) in height.	
		90	= Total Cover			
	50% of total cover:	45	20% of total cover:	18	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:	30 ft.)				herbaceous vines, regardless of size, <u>and</u> woody	
1. None Observed					plants, except woody vines, less than approximately	
2					3 ft (1 m) in height.	
3.						
4.					Woody vine - All woody vines, regardless of height.	
5.						
		0	= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes X No	
Remarks: (if observed, list mo	ornhological adaptati	ons below	1			
•						
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	species index	ked as OBL, FACW, or FAC).	

A positive indication of hydrophytic vegetation was observed (Prevalence Index is \leq 3.00).

Depth	Matrix			Redox F					
inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-5	10YR 4/4	_98_	10YR 3/6_	_2_	C	PL	Sand		
5-20	10YR 5/2	80	10YR 3/6		C	PL	Sand		
	Concentration, D=Dep					² Location: Pl	L=Pore Lining, M=Mate	ix. Ilematic Hydric Soils ³ :	
•	ol (A1)	icable to all	•		Surface (S8) (L	PP S T III	1 cm Muck (A9		
	` ,				, , ,		2 cm Muck (As		
	Epipedon (A2) Histic (A3)			Thin Dark Surface (S9) (LRR S, T, U) Loamy Mucky Mineral (F1) (LRR O)				c (F18) (outside MLRA 150A ,	
	` ,			Gleyed Ma		. 0)		dplain Soils (F19) (LRR P, S,	
Hydrogen Sulfide (A4)				ed Matrix (F	, ,			ght Loamy Soils (F20)	
Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U)				Dark Surfa	,		(MLRA 153B)	gin Loainy Jolis (FZU)	
5 cm Mucky Mineral (A7) (LRR P, T, U)				ed Dark Su		(MLRA 153B) Red Parent Material (TF2)			
Muck Presence (A8) (LRR U)			 •	Depression	` ,		Very Shallow Dark Surface (TF12)		
1 cm Muck (A9) (LRR P, T)				10) (LRR (` '		Other (Explain	, ,	
	ed Below Dark Surfa				5) F11) (MLRA 1 9	51)	Other (Explain	in Romano)	
	Dark Surface (A12)	00 (7111)			Masses (F12) (-	³ Indicators o	f hydrophytic vegetation and	
	Prairie Redox (A16)	(MI RA 1504		U	13) (LRR P, T	. , , ,		ology must be present,	
	Mucky Mineral (S1)) (MLRA 151)	, -,	unless distur	bed or problematic.	
′	Gleyed Matrix (S4)	(======		•	18) (MLRA 15	0A. 150B)			
	Redox (S5)			,	ain Soils (F19)	•			
	ed Matrix (S6)			-	, ,	-	PA, 153C, 153D)		
	Surface (S7) (LRR P,	S, T, U)	_	J	, ,	, (, , ,		
Restrictive	Layer (if observed)	:							
Type:									
Depth (i	nches):					Hydric	Soil Present? Yes	X No	
Remarks:									
A positive in	ndication of hydric so	il was observ	/ed.						

Project/Site:	Bluewater SPM	County:	Aransas	Sampling Date:	February 7, 2019
Applicant/Owner:	Lloyd Engineering	State	e: Texas	Sample Point:	DPA065_PEM
Investigator(s): C. I	Bailey and N. Trivin	o Section, Township	, Range:	N/A	
Landform (hillslope, terrace, etc	c.): Marsh, Saltwater	Local relief (conca	ve, convex, none):	Concave Slope (%): 0-5
Subregion (LRR or MLRA): _	Т	Lat: 27.85	54028 Long:	-97.045100 Da	tum: North American Datum 1983
Soil Map Unit Name:	Psamments, ra				January 0, 1900
, ,	ons on the site typical for this time of y	· /		explain in Remarks.)	
Are Vegetation No,		_significantly disturbed?		•	
		_naturally problematic?	•	explain any answers in	•
SUMMARY OF FINDIN	GS - Attach site map show	ing sampling poin	i locations, trans	sects, important	features, etc.
Hydrophytic Vegetation Prese	nt? Yes X No				
Hydric Soil Present?	Yes <u>X</u> No		ed Area		
Wetland Hydrology Present?	Yes <u>X</u> No	within a Wet	land? Y	es X No	
Remarks:					
·	to be within a wetland due to the pres	ence of all 3 wetland criter	ia.		
HYDROLOGY Wetland hydrology Indic	ators:				
	im of one is required; check all that ap	nlv)		dary Indicators (minimu Surface Soil Cracks (B6	
X Surface Water (A1)		: Fauna (B13)		Sparsely Vegetated Co	•
High Water Table (A		eposits (B15) (LRR U)		Drainage Patterns (B10	, ,
Saturation (A3)	Hydrog	en Sulfide Odor (C1)		Moss Trim Lines (B16)	
Water Marks (B1)		d Rhizospheres on Living	Roots(C3)	Dry-Season Water Tab	le (C2)
Sediment Deposits ((B2) Presen	ce of Reduced Iron (C4)		Crayfish Burrows (C8)	
Drift Deposits (B3)	Recent	Iron Reduction in Tilled So	oils (C6)	Saturation Visible on A	erial Imagery (C9)
X Algal Mat or Crust (I	· —	uck Surface (C7)		Geomorphic Position (D	02)
Iron Deposits (B5)		Explain in Remarks)		Shallow Aquitard (D3)	
	n Aerial Imagery (B7)			FAC-Neutral Test (D5)	
Water-Stained Leav	es (B9)			Sphagnum moss (D8) (LKK I, U)
Field Observations:					
Surface Water Present?	es X No Deptl	n (inches): 18			
Water Table Present?	es No X Depti	n (inches): >20			
	es No X Deptl	n (inches):	Wetland Hydrology	Present? Yes	X No
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial p	photos, previous inspection	s), if available:		
Remarks:					
A positive indication of we	tland hydrology was observed (at least	one primary indicator).			

	Absolute	Dominant	Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size: 30 ft.)	% cover		Status	Number of Dominant Species		
4 14 04 4		Орсоюз:	Otatus	· '	1	(Λ)
				That Are OBE, I ACW, OF I AC.	<u> </u>	(^)
2				T		
3				Total Number of Dominant		
4		<u> </u>		Species Across All Strata:	1	(B)
5						
6				Percent of Dominant Species		
	0	= Total Cover		That Are OBL, FACW, or FAC:	100%	(A/B)
50% of total	cover: 0	20% of total cover:	0			
Sapling Stratum (Plot size:30_ft)				Prevalence Index Worksheet:		
1. None Observed				Total % Cover of:	Multiply by:	
2				OBL species 95	x 1 = 95	
3.				FACW species 0	x 2 = 0	
4.				FAC species 0	x 3 = 0	
5.		- <u></u>		FACU species 0	x 4 = 0	
6.				UPL species 0	x 5 = 0	
•		= Total Cover		Column Totals: 95	(A) 95	—— (B)
50% of total		_= 10tal cover _ 20% of total cover:	0	Joint Folds.	,	— (^D)
Shrub Stratum (Plot size: 30 ft.)	. <u>U</u>	_ 20 /0 OI TOTAL COVEL.		Prevalence Index = B/A =	= 1.00	
1. None Observed				i revalence muex – B/A -	1.00	—
	_			Hydronhytic Vocatation Indiana	ore:	
2				Hydrophytic Vegetation Indicate		
3			-	1 - Rapid Test for Hydrop		
4				X 2 - Dominance Test is >5		
5				_X_3 - Prevalence Index is ≤		
6				Problematic Hydrophytic	Vegetation (Explain))
		_= Total Cover				
50% of total	cover: 0	20% of total cover:	0	¹ Indicators of hydric soil and wet	and hydrology must	
Herb Stratum (Plot size: 30 ft.)				be present, unless disturbed or pre-	oblematic.	
1. <i>Typha latifolia</i>	95	Yes	OBL	Definitions of Five Vegetation S	trata:	
2				Tree - Woody plants, excluding w	oody vines,	
3				approximately 20 ft (6m) or more i	n height and 3 in.	
4.				(7.6 cm) or larger in diameter at be	reast height (DBH).	
5.					3 ()	
6.				Sapling - Woody plants, excluding	g woody vines,	
7.				approximately 20 ft (6 m) or more	in height and less	
8.				than 3 in. (7.6 cm) DBH.		
9.				, ,		
				Shrub - Woody plants, excluding	woodv vines.	
10				approximately 3 to 20 ft (1 to 6 m)	•	
11		- Total Cayor		, , ,	3	
F00/ - 51 - 1		_= Total Cover	10	Herb - All herbaceous (non-wood)	/) plants including	
		20% of total cover:	19	herbaceous vines, regardless of s	,,,	
Woody Vine Stratum (Plot size: 30 ft.				plants, except woody vines, less t		
1. None Observed				3 ft (1 m) in height.	пап аррголіпасту	
2				on (1 m) in neight.		
3				NATIONAL AND AND AND AND AND AND AND AND AND AND		
4				Woody vine - All woody vines, re-	gardiess of neight.	
5						
	0	= Total Cover		Hydrophytic		
50% of total	cover: 0	20% of total cover:	0	Vegetation		
				Present? Yes X	No	
Remarks: (if observed, list morphological a	adaptations below	′).				
A positive indication of hydrophytic vegetat	ion was absorved	1 /> 500/ of dominant	anasias inday	rad as OBL FACIN as FACI		
A positive indication of hydrophytic vegetat	ion was observed	i (>50% ot dominant	species index	ted as UBL, FAUW, or FAU).		
A constant of the second of th		1/01	- 4 O OO'			
A positive indication of hydrophytic vegetat	ion was observed	I (Prevalence Index i	s ≤ 3.00).			

Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks Color (moist)	Depth	Matrix			Redox F	eatures			
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Applicable to all LRRs, unless otherwise noted.) Indicators (Capplicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ : Indicators for Problematic Hydric Soils Fig. Problematic Hydric Soils Fig. Problematic Hydric Soils Fig. Problematic Hydric Soils Fig. Problematic Hydric Soils Fig. Problematic Hydric Soil Present? Fig. Soc. Problematic Hydric Soil Present? Fig. Soc. Problematic Hydric Soil Present? Fig. Soc. Problematic Hydric Soil Hydric Soil Present? Fig. Soc. Problematic Hydric Soil Present? Fig. Soc. Problematic Hydric Soil Present? Fig. Soc. Problematic Hydric Soil Present? Fig. Soc. Problematic Hydric Soil Present? Fig. Soc. Problematic Hydric Hydric Soil Present? Fig. Soc. Problematic Hydric Hydric Soil Present? Fig. Soc. Problematic Hydric Soil Present? Fig. Soc. Problematic Hydric Soil Present? Fig. Soc. Problematic Hydric Hydric Hydric Hydric Hydric Hydr	inches)	Color (moist)	_%C	olor (moist)	%_	Type ¹	Loc ²	Texture	Remarks
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	0								Shovel Restriction
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)						-			
ydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
Histosol (A1)							² Location: PL		_
Histic Epipedon (A2) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Sem Mucky Mineral (A7) (LRR P, T, U) Bepleted Matrix (F2) Muck Presence (A8) (LRR P, T, U) Depleted Dark Surface (F6) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Redox Derressions (F8) Loamy Mucky Mineral (A7) (LRR P, T) Depleted Below Dark Surface (TF12) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Redox Depressions (F8) Murk Presence (A8) (LRR U) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A12) Depleted Below Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Sendy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) estrictive Layer (if observed): Type: Deep water Depth (inches): 0 missing Murky Mineral (S0) (Was observed.	lydric Soils	Indicators: (Appli	cable to all LR	Rs, unless of	herwise n	oted.)		Indicators for F	roblematic Hydric Soils ³ :
Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A, Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Scribble Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2) Wery Shallow Dark Surface (TF12) Scribble Muck (A9) (LRR P, T) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Wery Shallow Dark Surface (TF12) Scribble Muck (A9) (LRR P, T) Anomalous Bright Loamy Soils (F20) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Anomalous Bright Loamy Soils (F10) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Anomalous Bright Loamy Soils (F10) (MLRA 149A) Scripped Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A, 153C, 153D) Sandy Redox (S5) Piedmont Floodplain Soils (F10) (MLRA 149A, 153C, 153D) Setrictive Layer (if observed): Type: Deep water Depth (inches): 0 Hydric Soil was observed.	Histoso	I (A1)		Polyva	lue Below	Surface (S8) (L	RR S, T, U)	1 cm Muck	(A9) (LRR O)
Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) Organic Bodies (A6) (LRR P, T, U) Sc m Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR P, T) Depleted Dark Surface (F7) Muck Presence (A8) (LRR P, T) Depleted Dark Surface (F8) 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 (S7) (LRR P, S, T, U) Depleted Dark Surface (A12) Umbric Surface (F12) (LRR O, P, T) Depleted Ochric (F13) (LRR P, T, U) Delta Ochric (F13) (LRR P, T, U) Elta Ochric (F13) (MLRA 150A) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Berrictive Layer (if observed): Type: Deep water Depth (inches): 0 Hydric Soil Present? Yes X No emarks:	Histic E	pipedon (A2)		Thin D	ark Surfac	e (S9) (LRR S ,	T, U)	2 cm Muck	(A10) (LRR S)
Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) Organic Bodies (A6) (LRR P, T, U) Pepleted Dark Surface (F6) Muck Presence (A8) (LRR U) Pepleted Dark Surface (F7) Redox Depressions (F8) Pepleted Dark Surface (F7) Pepleted Dark Surfa	Black H	listic (A3)						Reduced V	ertic (F18) (outside MLRA 150A,
Stratified Layers (A5)		, ,		Loamy	Gleved Ma	atrix (F2)	-	Piedmont F	loodplain Soils (F19) (LRR P. S.
Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Dark Surface (F7) Marl (F10) (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) estrictive Layer (if observed): Type: Deep water Depth (inches): Deside Dark Surface (F6) (MLRA 153B) Red Parent Material (TF2) Wery Shallow Dark Surface (TF12) Very Shallow Dark Surface (TF12) Nother (Explain in Remarks) Very Shallow Dark Surface (TF12) Very Shallow Dark Surface (TF12) Nother (Explain in Remarks) Very Shallow Dark Surface (TF12) Nother (Explain in Remarks) Very Shallow Dark Surface (TF12) Nother (Explain in Remarks) Very Shallow Dark Surface (TF12) Nother (Explain in Remarks) Very Shallow Dark Surface (TF12) Nother (Explain in Remarks)		, ,							
			D T IIV		•	•			- , ,
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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Destrictive Layer (if observed): Type: Deep water Depth (inches): 0 Marl (F10) (LRR U) Marl (F10) (LRR U) X Other (Explain in Remarks) Very Shallow Dark Surface (TF12) X Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) SIndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. In the present of the present of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. In the present of hydrology must be present, unless disturbed or problematic. Anomalous Bright Loany Soils (F10) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Marl (F10) (LRR P, T, U) Satisped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Hydric Soil Present? Yes X No Marl (F12) (MLRA 151) In the present of hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes X No Marl (F12) (MLRA 151) In the present of hydrology must be present, unless disturbed or problematic. In the present of hydrology must be present, unless disturbed or problematic. In the present of hydrology must be present, unless disturbed or problematic. In the present of hydrology must be present, unless disturbed or problematic. In the present of hydrology must be present, unless disturbed or problematic. In the present of hydrology must be present, unless disturb						` '		-	•
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) Dark Surface (S7) (LRR P, S, T, U) Destrictive Layer (if observed): Type: Deep water Depth (inches): 0 Marl (F10) (LRR U) Marl (F10) (LRR O, F, T) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, F, T, U) Wetland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematic. Metland hydrology must be present, unless disturbed or problematics. Metland hydrology must be present, unless disturbed or problematics. Metland hydrology must be present, unless di						` '			, ,
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) Delta Ochric (F18) (MLRA 150A, 150B) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) estrictive Layer (if observed): Type: Deep water Depth (inches): 0 Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Wetland hydrology must be present, unless disturbed or problematic. Netland hydrology must be present, unless disturbed or problematic. Meduced Vertic (F18) (MLRA 150A, 150B) Reduced Vertic (F18) (MLRA 150A, 150B) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D) Hydric Soil Present? Yes X No Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D)			J)		•	-			, ,
Thick Dark Surface (A12)						=		X Other (Exp	ain in Remarks)
Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) estrictive Layer (if observed): Type: Deep water Depth (inches): 0 Hydric Soil Present? Yes X No emarks: positive indication of hydric soil was observed.	Deplete	d Below Dark Surfac	ce (A11)	Deplet	ed Ochric ((F11) (MLRA 1	51)	_	
Sandy Mucky Mineral (S1) (LRR O, S) 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) estrictive Layer (if observed): Type: Deep water Depth (inches): 0 Hydric Soil Present? Yes X No emarks:	Thick D	ark Surface (A12)		Iron-M	anganese	Masses (F12)	LRR O, P, T)		
Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151)	Coast F	Prairie Redox (A16) (MLRA 150A)	Umbrid	Surface (F13) (LRR P, T	, U)		
Sandy Gleyed Matrix (S4)	Sandy N	Mucky Mineral (S1) (LRR O, S)	Delta (Ochric (F17	7) (MLRA 151)		uniess di	sturbed or problematic.
Sandy Redox (S5)	Sandy (Gleved Matrix (S4)		Reduc	ed Vertic (I	- - - - - - - - - - - - - - - - - - -	0A, 150B)		
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: Deep water Depth (inches): 0									
Dark Surface (S7) (LRR P, S, T, U) estrictive Layer (if observed): Type: Deep water Depth (inches): 0 Hydric Soil Present? Yes X No emarks: positive indication of hydric soil was observed.		, ,				, ,		A 153C 153D)	
estrictive Layer (if observed): Type: Deep water Depth (inches): 0 Hydric Soil Present? Yes X No emarks: positive indication of hydric soil was observed.		, ,	e T II)		alous Brigin	t Louiny Cons (i	20) (MEICH 140	д, 1000, 100 <i>Б)</i>	
Type: Deep water Depth (inches): 0 Hydric Soil Present? Yes X No emarks: positive indication of hydric soil was observed.		,	-, -, -,						
positive indication of hydric soil was observed.	Depth (in	ches): 0					Hydric	Soil Present?	'es X No
	Remarks:								
/ater too deep to dig; soils assumed hydric.	A positive ind	dication of hydric soi	l was observed.						
/ater too deep to dig; soils assumed hydric.									
	Vater too de	eep to dig; soils assu	med hydric.						

Project/Site:	Bluewater SPM	С	county:	Aransas		Sampling Date:	February 7, 2019
Applicant/Owner:	Lloyd Engineer	ring	Stat	:e:	Texas	Sample Point:	DPA066_U
Investigator(s): C.	. Bailey and	N. Trivino S	Section, Township	o, Range:		N/A	
Landform (hillslope, terrace, et		L	ocal relief (conca	ave, convex, i	none):C	Convex Slope	(%): 0-5
Subregion (LRR or MLRA):	T		Lat:27.8	54469	Long:	·97.047599 D	atum: North American Datum 1983
Soil Map Unit Name:		ments, rarely flood			NWI Clas	sification:	January 0, 1900
Are climatic / hydrologic condit	tions on the site typical for this				_ ` '	lain in Remarks.)	
	,Soil No ,or Hydrology		-			es" present? Ye	
Are Vegetation No	,Soil No, or Hydrology	No naturall	y problematic?	(If	needed, exp	lain any answers i	n Remarks.)
SUMMARY OF FINDI	NGS - Attach site map	showing sa	mpling poin	t location	ıs, transe	cts, importan	it features, etc.
Hydrophytic Vegetation Prese	ent? Yes X	No					
Hydric Soil Present?	Yes	No X	Is the Samp	led Area			
Wetland Hydrology Present?		No X	within a We		Yes	N	o X
Remarks:			•				
This point was determine	d not to be within a wetland du	a to the look of hy	dria sails and wa	tland bydrala	av.		
i nis point was determine	d not to be within a wetland du	e to the lack of hy	dric soils and we	tiana nyarolog	gy.		
HYDROLOGY							
Wetland hydrology Indi	cators:				Secondar	y Indicators (minim	num of two required)
Primary Indicators (minim	num of one is required; check a	ll that apply)			Sur	face Soil Cracks (I	36)
Surface Water (A1		Aquatic Fauna (B13)		Spa	arsely Vegetated C	oncave Surface (B8)
High Water Table ((A2)	Marl Deposits (E	315) (LRR U)		Dra	inage Patterns (B	10)
Saturation (A3)		Hydrogen Sulfid	, ,			ss Trim Lines (B16	•
Water Marks (B1)		Oxidized Rhizos	pheres on Living	Roots(C3)	Dry	-Season Water Ta	ble (C2)
Sediment Deposits	(B2)	Presence of Rec	duced Iron (C4)		Cra	yfish Burrows (C8))
Drift Deposits (B3)		Recent Iron Red	luction in Tilled S	oils (C6)	Sat	uration Visible on <i>i</i>	Aerial Imagery (C9)
Algal Mat or Crust	(B4)	Thin Muck Surfa	ice (C7)		Ge	omorphic Position	(D2)
Iron Deposits (B5)		Other (Explain in	n Remarks)		Sha	allow Aquitard (D3)	
	on Aerial Imagery (B7)				_ X _ FA	C-Neutral Test (D5	·)
Water-Stained Lea	ves (B9)				Spl	nagnum moss (D8)	(LRR T, U)
Field Observations							
Field Observations:	V. N. V	Don'th Cook of	.				
	Yes NoX	Depth (inches	<i>,</i>				
	Yes NoX	Depth (inches		Madand H	dua la aux Du		N. V
Saturation Present? (includes capillary fringe)	Yes NoX	Depth (inches): <u>>20</u>	wetland H	ydrology Pro	esent? Yes	NOX
	(stream gauge, monitoring well	L garial photos p	rovious inspection	as) if sysilabl	lo:		
Describe Recorded Data	(stream gauge, monitoring wei	i, aeriai priotos, pi	revious inspection	is), ii avallabi	ie.		
Remarks:							
Remarks.							
No positive indication of v	wetland hydrology was observe	d.					
-							

	Absolute	Dominant	Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size: 30 ft.)	% cover	Species?	Status	Number of Dominant Species		
1 Name Observed	-	<u>Species :</u>	Status		•	(A)
1. None Observed		· —		That Are OBL, FACW, or FAC:	3	(A)
2						
3				Total Number of Dominant		
4		· —		Species Across All Strata:	3	(B)
5						
6				Percent of Dominant Species		
	0	= Total Cover		That Are OBL, FACW, or FAC:	100%	(A/B)
50% of total of	cover: 0	20% of total cover:	0			
Sapling Stratum (Plot size:30 ft)				Prevalence Index Worksheet:		
1. None Observed				Total % Cover of:	Multiply by:	:
2				OBL species 60	x 1 = 60	
3.		· <u></u>		FACW species 35	x 2 = 70	
4.		<u></u>		FAC species 25	x 3 = 75	
5.				FACU species 0	x 4 = 0	
6.				UPL species 0	x 5 = 0	
o		= Total Cover		Column Totals: 120	(A) 205	(B)
EOO/ of total o			0	Column rotals.	(A) <u>203</u>	(D)
50% of total o	cover:u	20% of total cover:		Durantan as Inday - D/A	4.74	
Shrub Stratum (Plot size: 30 ft.)				Prevalence Index = B/A :	= 1.71	
1. None Observed	_					
2.		<u> </u>		Hydrophytic Vegetation Indicat		
3		· —		1 - Rapid Test for Hydrop	, ,	
4	_	<u> </u>		X 2 - Dominance Test is >5		
5				X_3 - Prevalence Index is ≤		
6	_	<u> </u>		Problematic Hydrophytic	Vegetation (Explain))
		= Total Cover				
50% of total o	cover: 0	20% of total cover:	0	¹ Indicators of hydric soil and wet	land hydrology must	
Herb Stratum (Plot size: 30 ft.)				be present, unless disturbed or pr	oblematic.	
Spartina spartinae	60	Yes	OBL	Definitions of Five Vegetation S	Strata:	
2. Andropogon virginicus	25	Yes	FAC	Tree - Woody plants, excluding v	voody vines,	
3. Rhynchospora colorata	35	Yes	FACW	approximately 20 ft (6m) or more	n height and 3 in.	
4	_	<u> </u>		(7.6 cm) or larger in diameter at b	reast height (DBH).	
5						
6				Sapling - Woody plants, excludin	g woody vines,	
7				approximately 20 ft (6 m) or more	in height and less	
8.				than 3 in. (7.6 cm) DBH.		
9.						
10.				Shrub - Woody plants, excluding	woody vines,	
 11.	_	<u> </u>		approximately 3 to 20 ft (1 to 6 m)	in height.	
	120	= Total Cover				
50% of total of		-	24	Herb - All herbaceous (non-wood	y) plants, including	
Woody Vine Stratum (Plot size: 30 ft.				herbaceous vines, regardless of s	ize, <u>and</u> woody	
1. None Observed				plants, except woody vines, less t	han approximately	
2.	_			3 ft (1 m) in height.		
3						
4.				Woody vine - All woody vines, re	gardless of height.	
•						
5		= Total Cover		Hydrophytic		
50% of total of		20% of total cover:	0	Vegetation		
30 % of total c	.ovei	20 % Of total cover.		_	No	
				Present? Yes X	No	
Demarks: (if sheer and list marrhalogical as	lantations halove	`				
Remarks: (if observed, list morphological ad	iaptations below).				
A positive indication of hydrophytic vegetation	n was observed	(>50% of dominant	species index	ed as OBL, FACW, or FAC).		
A positive indication of hydrophytic vegetation	n was observed	(Prevalence Index i	$s \le 3.00$).			

)epth	Matrix			Redox F	eatures			
inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-20	10YR 5/3	100	None				Sand	
							-	
 Type: C=C	Concentration, D=Dep	 nletion_RM=R	educed Matrix N	 1S=Masker	Sand Grains	² Location: Pl	 L=Pore Lining, M=Mati	iv
	s Indicators: (Appl					Location. 1		lematic Hydric Soils ³ :
Histoso			•		Surface (S8) (LI	RR S. T. U)	1 cm Muck (A9	
	Epipedon (A2)				(S9) (LRR S,		2 cm Muck (A1	,
	Histic (A3)				eral (F1) (LRR			(F18) (outside MLRA 150A
	gen Sulfide (A4)			Gleyed Ma		•		dplain Soils (F19) (LRR P, S,
	ed Layers (A5)			ed Matrix (F			Anomalous Bri	ght Loamy Soils (F20)
	c Bodies (A6) (LRR	P, T, U)		Dark Surfa	•		(MLRA 153B)	- , ,
5 cm M	lucky Mineral (A7) (L	RR P, T, U)	Deplet	ed Dark Su	rface (F7)		Red Parent Ma	terial (TF2)
Muck F	Presence (A8) (LRR	U)	Redox	Depression	ns (F8)		Very Shallow D	ark Surface (TF12)
1 cm N	Muck (A9) (LRR P, T))	Marl (F	10) (LRR (J)		Other (Explain	in Remarks)
Deplete	ed Below Dark Surfa	ice (A11)	Deplet	ed Ochric (F11) (MLRA 15	1)		
Thick [Dark Surface (A12)		Iron-M	anganese N	Masses (F12) (I	LRR O, P, T)		f hydrophytic vegetation and
Coast I	Prairie Redox (A16)	(MLRA 150A)	Umbrid	Surface (F	13) (LRR P, T,	U)		ology must be present, bed or problematic.
Sandy	Mucky Mineral (S1)	(LRR O, S)	Delta (Ochric (F17) (MLRA 151)		unicoo diotai	bed of problematic.
	Gleyed Matrix (S4)			,	18) (MLRA 15 0	· ·		
	Redox (S5)				ain Soils (F19) (. ,		
	ed Matrix (S6)		Anoma	alous Bright	Loamy Soils (F	(MLRA 149	A, 153C, 153D)	
Dark S	Surface (S7) (LRR P,	S, I, U)						
Restrictive	Layer (if observed)):						
Type:								
Depth (in						Hydric	Soil Present? Yes	No X
2 op (,		
Remarks:								
lo positive i	indication of hydric s	oils was obse	ved.					

Project/Site:	Bluewater SPM	County:	Aransas	Samplino	g Date: February 7, 2019
Applicant/Owner:	Lloyd Engineering		State:		Point: DPA067 PEM
· · · — — — — — — — — — — — — — — — — —	ailey and N. T	rivino Section, T	ownship, Range:	<u> </u>	N/A
Landform (hillslope, terrace, etc.)			ef (concave, convex,	none): None	Slope (%): 0-5
Outro di a (LDD a MLDA)	T			·	98 Datum: North American Datum 1983
Soil Map Unit Name:		eaches		NWI Classification	n: E2USN
Are climatic / hydrologic condition	ns on the site typical for this time	of year? (Yes / No) YES	(if no, explain in Re	emarks.)
Are Vegetation No ,So	oil No ,or Hydrology N	• ,		I Circumstances" pres	ent? Yes X No
Are Vegetation No ,So	oil No ,or Hydrology N	lo naturally probler	natic? (If needed, explain any	answers in Remarks.)
SUMMARY OF FINDING	29 - Attach eite man eh	owing sampling	n noint location	ne transacte im	anortant features, etc
	- Attach site map sin	ownig sampini		iis, transcots, iii	
Hydrophytic Vegetation Present	? Yes <u>X</u> No				
Hydric Soil Present?			e Sampled Area		
Wetland Hydrology Present?	Yes X No	with	in a Wetland?	Yes X	No
Remarks: This point was determined to	o be within a wetland due to the	presence of all 3 wetla	and criteria.		
HYDROLOGY Wetland bydrology Indian	toro				
Wetland hydrology Indicat					ors (minimum of two required)
	n of one is required; check all tha				I Cracks (B6)
Surface Water (A1)		uatic Fauna (B13)	5.11)		egetated Concave Surface (B8)
X High Water Table (A2	· —	rl Deposits (B15) (LRI			atterns (B10)
Saturation (A3)		drogen Sulfide Odor ((•	Moss Trim L	, ,
Water Marks (B1)		idized Rhizospheres o	- , ,		Water Table (C2)
Sediment Deposits (B	· —	esence of Reduced Iro	• •	Crayfish Bur	, ,
Drift Deposits (B3)		cent Iron Reduction in	filled Soils (C6)		/isible on Aerial Imagery (C9)
Algal Mat or Crust (B4	· —	n Muck Surface (C7)			Position (D2)
Iron Deposits (B5)		ner (Explain in Remark	(S)	Shallow Aqu	, ,
Inundation Visible on	, ,			X FAC-Neutra	, ,
Water-Stained Leave	s (B9)			Sphagnum r	moss (D8) (LRR T, U)
Field Observations:					
	es NoX D	Depth (inches): N/A	\		
		Depth (inches): 10			
Saturation Present? Ye		Depth (inches): >20		lydrology Present?	Yes X No
(includes capillary fringe)	No 110X		Walana i	iyarology i rocom.	165 <u>x</u> 115
Describe Recorded Data (st	ream gauge, monitoring well, ae	rial photos, previous ir	nspections), if availab	ole:	
Remarks:					
- Nomano					
A positive indication of wetla	and hydrology was observed (at l	east one primary indic	ator).		

Sampling Point:	DPA067 PEM

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 30) ft.)	% cover	Species?	Status	Number of Dominant Species	
· · · · · · · · · · · · · · · · · · · 	/ /				That Are OBL, FACW, or FAC: 2	(A)
					That 710 GB2, 171011, 611710.	(,,)
2					Total Number of Densire and	
3					Total Number of Dominant	(D)
4			· 		Species Across All Strata: 2	(B)
5						
6					Percent of Dominant Species	
		0	= Total Cover		That Are OBL, FACW, or FAC: 100%	(A/B)
50	% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size: 30) ft.)				Prevalence Index Worksheet:	
1. None Observed					Total % Cover of: Multiply by:	Ì
2.					OBL species 125 x 1 = 125	
3	-				FACW species 0 x 2 = 0	_
3.					FAC species 0 x 3 = 0	
4					· ———	
5					FACU species x 4 = 0	
6					UPL species 0 x 5 = 0	
			= Total Cover		Column Totals: (A)125	(B)
50	% of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size: 30) ft.)				Prevalence Index = B/A = 1.00	
1. None Observed						
2.					Hydrophytic Vegetation Indicators:	
3.					1 - Rapid Test for Hydrophytic Vegetation	
4.					X 2 - Dominance Test is >50%	
					X 3 - Prevalence Index is $\leq 3.0^{1}$	
5						
6			·		Problematic Hydrophytic Vegetation ¹ (Explain)	
		0	= Total Cover			
50	% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size: 30) ft)				be present, unless disturbed or problematic.	
Spartina spartinae		15	No	OBL_	Definitions of Five Vegetation Strata:	
2. Borrichia frutescens		30	Yes	OBL	Tree - Woody plants, excluding woody vines,	
3. Distichlis spicata		80	Yes	OBL	approximately 20 ft (6m) or more in height and 3 in.	
4.					(7.6 cm) or larger in diameter at breast height (DBH).	
5.					(1.10 only of larger in diameter at broadt neight (2211).	
					Sapling - Woody plants, excluding woody vines,	
6					approximately 20 ft (6 m) or more in height and less	
7					than 3 in. (7.6 cm) DBH.	
8					than o in. (7.5 oin) BBH.	
9					Observation William I and a second additional additional and a second additional add	
10					Shrub - Woody plants, excluding woody vines,	
11					approximately 3 to 20 ft (1 to 6 m) in height.	
		125	= Total Cover			
50	% of total cover:	62.5	20% of total cover:	25	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:	30 ft.)		·		herbaceous vines, regardless of size, and woody	
1. None Observed	,				plants, except woody vines, less than approximately	
2.					3 ft (1 m) in height.	
					, ,	
3					Woody vine - All woody vines, regardless of height.	
4					Troody vine - 7 in woody vines, regardless of fleight.	
5			·			
		0	= Total Cover		Hydrophytic	
50	% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes X No	
Remarks: (if observed, list morph	nological adaptati	ons below).			
,						
A positive indication of hydrophyti	ic vegetation was	observed	(>50% of dominant	species index	ed as OBL, FACW, or FAC).	
A positive indication of hydrophyti	ic vegetation was	observed	(Prevalence Index is	$s \le 3.00$).		

Depth	Matrix			Redox F	eatures				
(inches)	Color (moist)	%_	Color (moist)	%_	Type ¹	Loc ²	Texture	Remarks	
0-6	10YR 5/3	_80_	10YR 4/3	_20_	C	PL	Sand		
6-20	N 4	_80_	10YR 4/3_	5	C	PL	Sandy Clay Loam	Dual Matrix	
6-20	10YR 5/3	15	None				Sandy Loam		
				_					
¹ Type: C=C	Concentration, D=Dep	oletion, RM	l=Reduced Matrix, M	IS=Masked	Sand Grains.	² Location: P	L=Pore Lining, M=N	Matrix.	
Hydric Soil	s Indicators: (Appl	icable to	all LRRs, unless ot	nerwise no	oted.)		Indicators for P	roblematic Hydric Soils ³ :	
Histos	ol (A1)		Polyval	ue Below S	Surface (S8) (L	RR S, T, U)	1 cm Muck	(A9) (LRR O)	
Histic I	Epipedon (A2)		Thin Da	ark Surface	(S9) (LRR S,	T, U)		(A10) (LRR S)	
	Histic (A3)		Loamy	Mucky Min	eral (F1) (LRR	O)		ertic (F18) (outside MLRA 150A,B	
Hydrog	gen Sulfide (A4)		Loamy	Gleyed Ma	trix (F2)		Piedmont F	oodplain Soils (F19) (LRR P, S, T)	
	ed Layers (A5)			Depleted Matrix (F3) Anomalous Bright Loamy			Bright Loamy Soils (F20)		
·	c Bodies (A6) (LRR			Dark Surfa	ce (F6)		(MLRA 153	B)	
	/lucky Mineral (A7) (L		J)Deplete	ed Dark Su	rface (F7)			Material (TF2)	
	Presence (A8) (LRR	•		Depressior	` '			w Dark Surface (TF12)	
1 cm N	/luck (A9) (LRR P, T)			10) (LRR L			Other (Expl	ain in Remarks)	
	ed Below Dark Surfa	ce (A11)		•	F11) (MLRA 15	•	•		
	Dark Surface (A12)			•	/lasses (F12) (³ Indicators of hydrophytic vegetation and wetland hydrology must be present,		
	Prairie Redox (A16)	•	<i>'</i> —					sturbed or problematic.	
	Mucky Mineral (S1)	(LRR O, S	· —	, ,) (MLRA 151)		aooo a	standed of problematic.	
	Gleyed Matrix (S4)			,	18) (MLRA 15				
	Redox (S5)			•	ain Soils (F19)				
	ed Matrix (S6)		Anoma	lous Bright	Loamy Soils (F	(20) (MLRA 14	9A, 153C, 153D)		
Dark S	Surface (S7) (LRR P,	S, T, U)							
Restrictive	Layer (if observed)	:							
Type:									
Depth (ii	nches):					Hydri	c Soil Present? Y	esX No	
Remarks:									

A positive indication of hydric soil was observed.

Project/Site:	Bluewater SPM	Co	ounty:	Aransas	5	Sampling Date:	February 7, 2019
Applicant/Owner:	Lloyd Engineeri		Stat			Sample Point:	DPA069 PEM
···	Bailey and N	N. Trivino S	ection, Township	o, Range:		. N/A	<u>-</u>
Landform (hillslope, terrace, etc		ter L	ocal relief (conca	ave, convex, r	none): Co	ncave Slope	(%): 0-5
	None		Lat: 27.8			7.050501 Da	atum: North American Datum 1983
Soil Map Unit Name:		Beaches	-		NWI Class	ification:	E2USN
Are climatic / hydrologic condition	ons on the site typical for this ti	ime of year? (Yes / No)	YES	(if no, expl	ain in Remarks.)	
Are Vegetation No,	Soil No ,or Hydrology _	No significa	ntly disturbed?	Are "Normal	Circumstance	es" present? Yes	sX No
Are Vegetation No,	Soil No ,or Hydrology _	No naturally	problematic?	(If	needed, expla	ain any answers in	Remarks.)
SUMMARY OF FINDIN	GS - Attach site map	showing sar	nplina poin	t location	s. transec	ts. importan	t features, etc.
			1 31				
Hydrophytic Vegetation Preser	nt? Yes X	No					
Hydric Soil Present?		No	Is the Samp		W	V N	
Wetland Hydrology Present?	Yes X	No	within a We	tiana?	Yes_	X No	·
Remarks:							
·	to be within a wetland due to t	the presence of a	ll 3 wetland crite	ria.			
HYDROLOGY	-4						
Wetland hydrology Indic						•	um of two required)
	ım of one is required; check all					ace Soil Cracks (B	*
Surface Water (A1)		Aquatic Fauna (E	•			, ,	oncave Surface (B8)
High Water Table (A		Marl Deposits (B				nage Patterns (B1	·
X Saturation (A3)		Hydrogen Sulfide	, ,	Dooto(C2)		s Trim Lines (B16)	
Water Marks (B1)		Oxidized Rhizosp	_	R00(S(C3)		Season Water Tal	Die (G2)
Sediment Deposits (· · —	Presence of Red		oilo (C6)		fish Burrows (C8)	orial Imagany (CO)
Drift Deposits (B3) Algal Mat or Crust (B		Recent Iron Redu Thin Muck Surface		olis (CO)		morphic Position (erial Imagery (C9)
Iron Deposits (B5)	· —	Other (Explain in				low Aquitard (D3)	52)
	n Aerial Imagery (B7)	Other (Explain in	ixemarks)			-Neutral Test (D5)	
Water-Stained Leav	, ,					agnum moss (D8)	
Water-Stained Leav	es (B3)				Opin	agridin moss (Do)	(LIXIX 1, O)
Field Observations:							
Surface Water Present? Y	/es NoX	Depth (inches)	: N/A				
Water Table Present? Y	es No X	Depth (inches)	>20				
Saturation Present? Y	/es X No	Depth (inches)	. 0	Wetland Hy	drology Pre	sent? Yes	X No
(includes capillary fringe)							
Describe Recorded Data (stream gauge, monitoring well,	aerial photos, pre	evious inspection	ns), if available	e:		
Damaria.							
Remarks:							
A positive indication of wel	tland hydrology was observed	(at least one prim	ary indicator).				
'	, 0,		,				
Aquatic Fauna: crabs.							

Sampling Point:	DPA069_PEM
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	Absolute	Dominant	Indicator	Dominance Test worksheet:		
Tara Charles (Diet sines 20 ft						
Tree Stratum (Plot size: 30 ft.		Species?	<u>Status</u>	Number of Dominant Species	4	(4)
1. None Observed				That Are OBL, FACW, or FAC:	1	(A)
2						
3				Total Number of Dominant		
4				Species Across All Strata:	11	(B)
5						
6.				Percent of Dominant Species		
		= Total Cover		That Are OBL, FACW, or FAC:	100%	(A/B)
50% of		20% of total cover:	0		10070	(,,,,,
		_ 20 % or total cover.		Prevalence Index Worksheet:		
Sapling Stratum (Plot size: 30 ft.)					
1. None Observed				Total % Cover of:	Multiply by:	
2				OBL species95	x 1 = 95	
3				FACW species10	x 2 = 20	
4				FAC species0	x 3 = 0	
5				FACU species 0	x 4 = 0	
6.				UPL species 0	x 5 = 0	
		= Total Cover		Column Totals: 105	(A) 115	—— (B)
E00/. of		20% of total cover:	Ο	100		— (⁵ /
		_ 2070 01 (0(a) 00/01.		Provolence Index = D/A =	. 440	
Shrub Stratum (Plot size: 30 ft.	_,			Prevalence Index = B/A =	1.10	
1. None Observed		_				
2				Hydrophytic Vegetation Indicate	ors:	
3				1 - Rapid Test for Hydrop	hytic Vegetation	
4				X 2 - Dominance Test is >5	0%	
5.				X 3 - Prevalence Index is ≤	3.0 ¹	
6.				Problematic Hydrophytic	Vegetation ¹ (Explain)	
*		= Total Cover			5 (1 /	
F00/ of		_ 20% of total cover:	0	1 Indicators of hydric soil and wat	and budralagu must	
	·	_ 20% or total cover.	0	Indicators of hydric soil and wetl		
Herb Stratum (Plot size: 30 ft.		.,		be present, unless disturbed or pro		
Salicornia bigelovii	90	Yes	OBL_	Definitions of Five Vegetation S		
2. Lycium carolinianum	5	No	FACW_	Tree - Woody plants, excluding w	oody vines,	
3. Sesuvium portulacastrum	5	No	FACW	approximately 20 ft (6m) or more in	n height and 3 in.	
4. Distichlis littoralis	5	No	OBL	(7.6 cm) or larger in diameter at br	east height (DBH).	
5.				, ,	- , ,	
6.				Sapling - Woody plants, excluding	g woody vines,	
			-	approximately 20 ft (6 m) or more	in height and less	
7				than 3 in. (7.6 cm) DBH.	· ·	
8		-				
9				Shrub - Woody plants, excluding y	woody vinos	
10				,, ,	• •	
11				approximately 3 to 20 ft (1 to 6 m)	in height.	
	105	= Total Cover				
50% of	total cover: 52.5	_ 20% of total cover:	21	Herb - All herbaceous (non-woody	,	
Woody Vine Stratum (Plot size: 30				herbaceous vines, regardless of si	ze, <u>and</u> woody	
1. None Observed				plants, except woody vines, less the	nan approximately	
2.				3 ft (1 m) in height.		
3						
	· · · · · · · · · · · · · · · · · · ·			Woody vine - All woody vines, red	nardless of height	
4				Troody vines, let	5 31000 of Holyitt.	
5						
		_= Total Cover		Hydrophytic		
50% of	total cover: 0	_ 20% of total cover:	0	Vegetation		
				Present? Yes X	No	
					<u>—</u> ——	
Remarks: (if observed, list morpholog	ical adaptations below	v)		<u> </u>		
, , , , ,	·	,				
A positive indication of hydrophytic veg	getation was observed	d (>50% of dominant	species index	ked as OBL, FACW, or FAC).		
A positive indication of hydrophytic veg	getation was observed	d (Prevalence Index i	s ≤ 3.00).			
	-	•	,			

0-20 10YR 5/2 90 10YR 5/8 5 C PL Sandy Clay 0-20 N 2.5 5 None — — — Sandy Clay Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Type: Sandy Clay Sandy Clay Loamy Gleyed Matrix, (F3) Loamy Mucky Mineral (F1) (LRR O) Loamy Mucky Mineral (F1) (LRR O) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR O) Reduced Vertic (F18) (outside MI Reduced Matrix (F3) Anomalous Bright Loamy Soils (F2) Well Care Anomalous Bright Loamy Soils (F2) Wery Shallow Dark Surface (F19) Well Care Opeleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Loamy Gleyed Matrix (F1) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Loamy Gleyed Matrix (F1) Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Loamy Gleyed Matrix (F1) Umbric Surface (F13) (LRR P, T, U) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 150A) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Type:	inches) Col	Matrix			Redox F	eatures			
0-20 10YR 5/2 90 10YR 5/8 5 C PL Sandy Clay 0-20 N 2.5 5 None — — — — Sandy Clay 1 Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 1 Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 1 Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 1 Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 2 Location: PL=Pore Lining, M=Matrix. 1 Indicators for Problematic Hydric So 1 cm Muck (A9) (LRR Q) 1 cm Muck (A9) (LRR Q) 2 cm Muck (A10) (LRR Q) 2 cm Muck (A10) (LRR Q) 2 cm Muck (A10) (LRR Q) 3 Reduced Vertic (F18) (outside Mth (F2) 4 Piedmont Floodplain Soils (F19) (LR Q) 5 cm Mucky Mineral (A7) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) 6 Peleted Matrix (F3) 7 Redox Depressions (F8) 7 Redox Depressions (F8) 8 Red Parent Material (TF2) 9 Very Shallow Dark Surface (TF12) 1 cm Muck (A9) (LRR P, T) 9 Depleted Dehric (F11) (MLRA 151) 1 Thick Dark Surface (A12) 1 cm Mucky Mineral (S1) (LRR Q, S) 2 Sandy Mucky Mineral (S1) (LRR Q, S) 2 Sandy Gleyed Matrix (S4) 2 Reduced Vertic (F18) (MLRA 150A) 3 Reduced Vertic (F18) (MLRA 150A) 4 Reduced Vertic (F18) (MLRA 150A) 5 Sandy Gleyed Matrix (S4) 7 Reduced Vertic (F18) (MLRA 150A) 8 Reduced Vertic (F18) (MLRA 150A) 9 Reduced Vertic (F18)	0-20 1	or (moist)	 %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. PL=Pore Lining, M=Matrix. Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histo Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MI Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LR Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F2) Muck Presence (A6) (LRR P, T, U) Depleted Dark Surface (F6) (MLRA 153B) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Loamy Mucky Mineral (A7) (LRR P, T, U) Depleted Ochric (F11) (MLRA 151) Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 150) Sandy Mucky Mineral (S1) (LRR O, S) Piedmont Floodplain Soils (F20) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type:		0YR 5/2	90	10YR 5/8	5	C		Sandy Clay	
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	0-20	N 2.5	5	None				Sandy Clay	
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR P, T) Depleted Dark Surface (F6) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Depleted Dark Surface (F13) (LRR A151) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Mucky Mineral (S1) (LRR O, S) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Indicators for Problematic Hydric So Indicators for Problematic Hydric So 1 cm Muck (A9) (LRR S, T, U) 1 cm Muck (A9) (LRR O, S) 1 cm Muck (A9) (LRR S, T, U) 1 cm Muck (A9) (LRR O, T, U) Peldwont Floodplain Soils (F2) (MLRA 153B) Anomalous Bright Loamy Soils (F2) (MLRA 153B) Reduced Vertic (F18) (MLRA 151) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Joelta Ochric (F13) (MLRA 150A) Stripped Matrix (S4) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type:									
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR P, T) Depleted Dark Surface (F6) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Depleted Dark Surface (F13) (LRR A151) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Reduced Vertic (F18) (outside Mineral (F1) (LRR O) 1 cm Muck (A9) (LRR P, T, U) Peldemont Floodplain Soils (F19) (LRR O, P, T) Anomalous Bright Loamy Soils (F2) (MLRA 153B) Anomalous Bright Loamy Soils (F2) (MLRA 153B) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Jandicators of hydrophytic vegets wetland hydrology must be pres unless disturbed or problematic. 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) Restrictive Layer (if observed): Type:									
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR P, T) Depleted Dark Surface (F6) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Depleted Dark Surface (F12) (LRR O, 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) Dark Surface (S7) (LRR P, T, U) Anomalous Bright Loamy Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F2) Muck Presence (A8) (LRR P, T) Depleted Dark Surface (F7) Marl (F10) (LRR U) Depleted Dark Surface (F7) 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 Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Indicators for Problematic Hydric So 1 cm Muck (A9) (LRR O, T, U) 1 cm Muck (A9) (LRR O, T, U) Reduced Vertic (F18) (LRR O, T, U) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D)									
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR P, T, U) Depleted Dark Surface (F6) 1 cm Muck (A9) (LRR P, T) Muck (A9) (LRR P, T) 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 Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Reduced Vertic (F18) (outside MI Piedmont Floodplain Soils (F19) (LRR O) 1 cm Muck (A9) (LRR O, Piedmont Floodplain Soils (F2) Muck Presence (A8) (LRR P, T, U) Depleted Dark Surface (F7) Marl (F10) (LRR U) Depleted Dark Surface (F7) 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 Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Restrictive Layer (if observed): Type: Indicators for Problematic Hydric So 1 cm Muck (A9) (LRR O, P) Reduced Vertic (F18) (LRR O, P, T) Unbric Surface (F7) Mark Surface (F13) (LRR O, P, T) Sandy Redox (S5) Piedmont Floodplain Soils (F20) (MLRA 149A) Restrictive Layer (if observed): Type:									
Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR P, T) Depleted Dark Surface (F6) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Depleted Dark Surface (F12) (LRR O, 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) Dark Surface (S7) (LRR P, T, U) Anomalous Bright Loamy Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F2) Muck Presence (A8) (LRR P, T) Depleted Dark Surface (F7) Marl (F10) (LRR U) Depleted Dark Surface (F7) 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 Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Indicators for Problematic Hydric So 1 cm Muck (A9) (LRR O, T, U) 1 cm Muck (A9) (LRR O, T, U) Reduced Vertic (F18) (LRR O, T, U) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D)									
Histosol (A1)	Type: C=Concentr	ation, D=Dep	letion, RM	=Reduced Matrix, M	1S=Masked	Sand Grains.	² Location: P		
Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (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 (S6) Dark Surface (S7) (LRR P, S, T, U) Type: Thin Dark Surface (S9) (LRR S, T, U) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside ML Reduced Vertic (F18) (outside ML Reduced Vertic (F18) (outside ML Reduced Vertic (F18) (outside ML Reduced Vertic (F18) (outside ML Reduced Vertic (F18) (LRR O) Reduced Vertic (F18) (LRR O) Reduced Vertic (F18) (LRR O) Reduced Vertic (F18) (LRR O) Reduced Vertic (F18) (LRR O, N Reduced Vertic (F18) (LRR O, P, T) Other (Explain in Remarks) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Sandy Mucky Mineral (S1) (LRR O, S) Stripped Matrix (S4) Reduced Vertic (F18) (MLRA 150A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U)	lydric Soils Indica	ators: (Appli	cable to a	II LRRs, unless ot	herwise no	oted.)		Indicators for Proble	ematic Hydric Soils ³ :
Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MIL Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (L Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F2) (MLRA 153B) 5 cm Mucky Mineral (A7) (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) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) wetland hydrology must be presunless disturbed or problematic. Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 150A) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type:	Histosol (A1)			Polyva	lue Below S	Surface (S8) (L	RR S, T, U)	1 cm Muck (A9)	(LRR O)
Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Storm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F6) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) 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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR O, P, T) Piedmont Floodplain Soils (F2) (MLRA 153B) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Iron-Manganese Masses (F12) (LRR O, P, T) Wetland hydrology must be presunless disturbed or problematic. Piedmont Floodplain Soils (F19) (MLRA 150A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Type:	Histic Epipedo	n (A2)						2 cm Muck (A10)	(LRR S)
Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Som Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Marl (F10) (LRR U) Depleted Deleted Deleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Detented Dark Surface (F8) Depleted Dark Surface (F7) Red Parent Material (TF2) Wery Shallow Dark Surface (TF12) Other (Explain in Remarks) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type:	Black Histic (A	.3)		Loamy	Mucky Min	eral (F1) (LRR	O)	Reduced Vertic (F18) (outside MLRA 150A
Organic Bodies (A6) (LRR P, T, U) Sem Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Dark Surface (F6) Marl (F10) (LRR U) Depleted Dark Surface (F7) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 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) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Type:	Hydrogen Sulfi	ide (A4)		Loamy	Gleyed Ma	trix (F2)			, , , .
5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Y Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type:		` '		Deplete	ed Matrix (F	F3)		Anomalous Brigh	t Loamy Soils (F20)
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) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Marl (F10) (LRR U) Depleted Depressions (F8) Marl (F10) (LRR U) Other (Explain in Remarks)						` ,		,	
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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Umbric Surface (F13) (LRR P, T, U) Wetland hydrology must be pres unless disturbed or problematic. Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type:		, , ,				` '			• •
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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Wetland hydrology must be presunless disturbed or problematic. Matrix (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type:		` ', '	•		•	` '			, ,
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) Iron-Manganese Masses (F12) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type:					, .	-		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) Wetland hydrology must be pres unless disturbed or problematic. Reduced Vertic (F13) (LRR P, T, U) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type:	·		ce (A11)		`	, .	•	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) Restrictive Layer (if observed): Type:		` '			•	. , .			, , , ,
Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)		, , ,		· —	· — · · · · · · · · · · · · · · · · · ·		unless disturbed or problematic.		
X 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) Restrictive Layer (if observed): Type:		, , ,	LRR (), S)			•	04 4500)		
Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type:							· ·		
Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type:					•	, ,	•	DA 152C 152D)	
Restrictive Layer (if observed): Type:		` ,	e T II\	Anoma	ious Brigin	LUAITIY SUIIS (F	-20) (WILKA 14:	9A, 193C, 193D)	
Туре:	Daik Surface ((SI) (LIKK F,	3, 1, 0)						
	Restrictive Layer (if observed):	:						
	Type:								
Depth (inches): Hydric Soil Present? Yes X No	Depth (inches):						Hydrid	Soil Present? Yes	X No
	. , ,						-	_	
Remarks:	Remarks:						•		

Project/Site:	Bluewater SPM	County:	Aransas	Sampling Date:	February 7, 2019
Applicant/Owner:	Lloyd Engineering	Stat			
	illey and N. Trivin			 N/A	
Landform (hillslope, terrace, etc.):			ave, convex, none):	Convex Slope (%): 0-5
Outro di co (LDD co MLDA)	None		54171 Long:		tum: North American Datum 1983
Soil Map Unit Name:	Beac			Classification:	E2USN
Are climatic / hydrologic condition:	s on the site typical for this time of y	ear? (Yes / No)	YES (if no	, explain in Remarks.)	
Are Vegetation,So	il <u>No</u> ,or Hydrology <u>No</u>	significantly disturbed?	Are "Normal Circums	stances" present? Yes	X No
Are Vegetation No ,So	il No, or Hydrology No	naturally problematic?	(If needed	, explain any answers in	Remarks.)
SUMMARY OF FINDING	S - Attach site map show	ing sampling poin	t locations, trai	nsects. important	features, etc.
Hydrophytic Vegetation Present?					
Hydric Soil Present?	Yes <u>X</u> No				
Wetland Hydrology Present?	Yes <u>X</u> No	within a We	tland?	Yes X No	
Remarks:					
·	be within a wetland due to the pres	sence of all 3 wetland crite	ria.		
HYDROLOGY					
Wetland hydrology Indicat	ors:		Seco	ndary Indicators (minimu	m of two required)
Primary Indicators (minimum	of one is required; check all that ap	pply)		Surface Soil Cracks (Bo	•
Surface Water (A1)		c Fauna (B13)		Sparsely Vegetated Co	` '
X High Water Table (A2)	·	eposits (B15) (LRR U)		Drainage Patterns (B10))
Saturation (A3)		gen Sulfide Odor (C1)		Moss Trim Lines (B16)	
Water Marks (B1)		ed Rhizospheres on Living	Roots(C3)	Dry-Season Water Tab	le (C2)
Sediment Deposits (B2	· —	nce of Reduced Iron (C4)		Crayfish Burrows (C8)	
Drift Deposits (B3)		t Iron Reduction in Tilled S	oils (C6)	Saturation Visible on A	, ,
Algal Mat or Crust (B4	· —	uck Surface (C7)		Geomorphic Position (D	02)
Iron Deposits (B5)		(Explain in Remarks)		Shallow Aquitard (D3)	
Inundation Visible on A			<u>X</u>	FAC-Neutral Test (D5)	
Water-Stained Leaves	s (B9)			Sphagnum moss (D8) (LRR T, U)
Field Observations:					
	s No X Dept	h (inches): N/A			
		h (inches): N/A h (inches): 15			
Saturation Present? Yes		h (inches):	Wetland Hydrolog	v Procent? Vec	Y No
(includes capillary fringe)	No Dept	ii (iiiciles)	Wettand Hydrolog	y i resent: Tes	<u> </u>
	ream gauge, monitoring well, aerial	photos, previous inspection	ns), if available:		
Remarks:					
Tromatic.					
A positive indication of wetla	nd hydrology was observed (at leas	t one primary indicator).			

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft.)	% cover		Status	Number of Dominant Species	
4 44 64 4	,		_ 		That Are OBL, FACW, or FAC:	(A)
2.			· <u></u>		, , ,	,
3.			· <u></u>		Total Number of Dominant	
4.		-			Species Across All Strata:	(B)
5.						` '
6.					Percent of Dominant Species	
-		0	= Total Cover		That Are OBL, FACW, or FAC: 100%	(A/B)
	50% of total cover:		20% of total cover:	0		(,,,,,
Sapling Stratum (Plot size:	30 ft.)		. 2070 01 10101 00701.		Prevalence Index Worksheet:	
1 None Observed					Total % Cover of: Multiply by:	
			·		OBL species 100 x 1 = 100	
2					FACW species 0 x 2 = 0	
3					FAC species 0	
4			·		FACU species 0 x 4 = 0	
5						
6		0				(D)
	E00/ eft-t-1		= Total Cover	0	Column Totals: (A) (D)	(B)
Chruh Ctroture (District	50% of total cover:		20% of total cover:	U	Dravalance Index = D/A	
Shrub Stratum (Plot size:	<u>30 ft.</u>)				Prevalence Index = B/A = 1.00	
1. None Observed			<u> </u>			
2			<u> </u>		Hydrophytic Vegetation Indicators:	
3.			<u> </u>		1 - Rapid Test for Hydrophytic Vegetation	
4			·		X 2 - Dominance Test is >50%	
5			<u> </u>		X 3 - Prevalence Index is ≤ 3.0 ¹	
6			<u> </u>		Problematic Hydrophytic Vegetation ¹ (Explain)	
			= Total Cover			
	50% of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
1. Distichlis littoralis		95	Yes	OBL	Definitions of Five Vegetation Strata:	
2. Salicornia bigelovii		5	No	OBL	Tree - Woody plants, excluding woody vines,	
3					approximately 20 ft (6m) or more in height and 3 in.	
4			. <u> </u>		(7.6 cm) or larger in diameter at breast height (DBH).	
5			<u> </u>			
6			<u> </u>		Sapling - Woody plants, excluding woody vines,	
7			<u> </u>		approximately 20 ft (6 m) or more in height and less	
8		-	<u> </u>		than 3 in. (7.6 cm) DBH.	
9						
10					Shrub - Woody plants, excluding woody vines,	
11					approximately 3 to 20 ft (1 to 6 m) in height.	
		100	= Total Cover			
	50% of total cover:	50	20% of total cover:	20	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:	30 ft.)				herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2.					3 ft (1 m) in height.	
3.						
4.	<u> </u>				Woody vine - All woody vines, regardless of height.	
5						
-		0	= Total Cover		Hydrophytic	
	50% of total cover:		20% of total cover:	0	Vegetation	
	50 70 51 10101 00761.				Present? Yes X No	
					11030Ht: 163 A NO	
Remarks: (if observed list m	orphological adaptat	ione bolow	١			
Remarks: (if observed, list m	orpriological adaptat	ions below).			
A positive indication of hydro	ohytic vegetation was	s observed	(>50% of dominant	species index	xed as OBL, FACW, or FAC).	
A positive indication of hydrop	ohytic vegetation was	s observed	(Prevalence Index is	s ≤ 3.00).		

Depth	Matrix			Redox I	Features		·		
inches)	Color (moist)	%	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks	
0-20	10YR 5/2	98	10YR 5/8	2	С	PL	Sandy Clay		
Type: C=C	concentration, D=Dep	oletion, RM	=Reduced Matrix, N	//S=Maske	d Sand Grains.	² Location: P	L=Pore Lining, M=Matr	ix.	
Hydric Soils	s Indicators: (Appl	icable to a	II LRRs, unless ot	herwise r	oted.)			lematic Hydric Soils ³ :	
Histosol (A1)		Polyva	Polyvalue Below Surface (S8) (LRR S, T, U)			1 cm Muck (A9) (LRR O)			
Histic E	Epipedon (A2)		Thin D	Thin Dark Surface (S9) (LRR S, T, U)			2 cm Muck (A10) (LRR S)		
Black H	Histic (A3)		Loamy	Mucky Mi	neral (F1) (LRR	(O)	Reduced Vertic (F18) (outside MLRA 150		
— Hydrog	gen Sulfide (A4)		 Loamy	Gleyed M	atrix (F2)		Piedmont Floodplain Soils (F19) (LRR P, S,		
Stratifie	ed Layers (A5)		Deplete	ed Matrix ((F3)		Anomalous Bright Loamy Soils (F20)		
Organio	c Bodies (A6) (LRR	P, T, U)	Redox	Dark Surf	ace (F6)		(MLRA 153B)		
5 cm M	lucky Mineral (A7) (L	RR P, T, U			urface (F7)		Red Parent Ma	terial (TF2)	
Muck F	Presence (A8) (LRR	U)		Depression				ark Surface (TF12)	
1 cm M	luck (A9) (LRR P, T))		10) (LRR			Other (Explain	, ,	
Deplete	ed Below Dark Surfa	ce (A11)	Deplete	ed Ochric	(F11) (MLRA 1	51)			
Thick D	Dark Surface (A12)		Iron-Ma	anganese	Masses (F12) ((LRR O, P, T)		hydrophytic vegetation and	
Coast F	Prairie Redox (A16) ((MLRA 150	OA) Umbrio	: Surface (F13) (LRR P, T	, U)		ology must be present,	
Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151)						uniess distur	bed or problematic.		
Sandy	Gleyed Matrix (S4)		Reduce	ed Vertic (F18) (MLRA 15	0A, 150B)			
X Sandy	Redox (S5)		Piedmo	ont Floodp	lain Soils (F19)	(MLRA 149A)			
Strippe	ed Matrix (S6)		Anoma	lous Brigh	t Loamy Soils (F	=20) (MLRA 14	9A, 153C, 153D)		
Type: Depth (in						Hydrid	ric Soil Present? Yes X No		
	·-								
Remarks:									
A positive in	idication of hydric soi	il was obse	rved.						

Project/Site:	Bluewater SPM	C	County:	Aransas	S	ampling Date:	February 7, 2019
Applicant/Owner:	Lloyd Engineer	_	Stat	e:		Sample Point:	DPA072 PEM
	, · · · ·		Section, Township			 N/A	
Landform (hillslope, terrace, etc		ter I	Local relief (conca	ave, convex, n	ione): Cor	ncave Slope ((%): 0-5
	None		Lat: 27.8				tum: North American Datum 1983
Soil Map Unit Name:		Beaches	<u> </u>				January 0, 1900
Are climatic / hydrologic condition	ons on the site typical for this t	ime of year?	(Yes / No)	YES	 (if no, expla	in in Remarks.)	
Are Vegetation No ,S	Soil No , or Hydrology	No signific	antly disturbed?	Are "Normal	Circumstance	s" present? Yes	X No
Are Vegetation No ,S	Soil No , or Hydrology	No natural	ly problematic?	(If	needed, expla	in any answers in	Remarks.)
SUMMARY OF FINDIN	GS - Attach site man	showing sa	mnlina noin	t location	s transec	ts important	features etc
	- Attaon one map					to, important	. 10010100, 010.
Hydrophytic Vegetation Preser		No					
Hydric Soil Present?		No	Is the Samp	led Area			
Wetland Hydrology Present?	YesX	No	within a We	tland?	Yes _	X No)
Remarks:							
·	to be within a wetland due to	the presence of a	all 3 wetland crite	ria.			
HYDROLOGY							
Wetland hydrology Indic	ators:				Secondary	Indicators (minimu	ım of two required)
	ım of one is required; check al					ice Soil Cracks (B	·
X Surface Water (A1)		Aquatic Fauna (ncave Surface (B8)
High Water Table (A	·	Marl Deposits (E				age Patterns (B10	•
Saturation (A3)		Hydrogen Sulfid	, ,	D ((00)		Trim Lines (B16)	
Water Marks (B1)			spheres on Living	Roots(C3)		Season Water Tab	ole (C2)
Sediment Deposits (· · · —	Presence of Re		:1. (00)		ish Burrows (C8)	
Drift Deposits (B3)			duction in Tilled S	oils (C6)			erial Imagery (C9)
Algal Mat or Crust (E	· —	Thin Muck Surfa	, ,			norphic Position (I	02)
Iron Deposits (B5)		Other (Explain in	n Remarks)			ow Aquitard (D3)	
	n Aerial Imagery (B7)					Neutral Test (D5)	
Water-Stained Leave	es (b9)				Spria	gnum moss (D8)	(LKK 1, U)
Field Observations:							
	es X No	Depth (inches	s): 1				
	'es No X	Depth (inches	<i>,</i>				
	'es NoX	Depth (inches	<i>'</i> ——	Wetland Hy	drology Pres	ent? Yes	X No
(includes capillary fringe)			·		•		
Describe Recorded Data (s	stream gauge, monitoring well	, aerial photos, p	revious inspection	ns), if available	e:		
Remarks:							
A positive indication of wet	land hydrology was observed	(at least one prin	mary indicator).				
Aquatic Fauna: crabs.							

Sampling Point:	DPA072_PEM
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		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	30 ft)	% cover	Species?	Status	Number of Dominant Species	
4 44 64 4		70 00 001	<u>орожов.</u>	Otatao	·	(A)
					That Are OBE, I AOW, OF I AO.	(^)
2			-		Total Number of Deminant	
3					Total Number of Dominant	(B)
4					Species Across All Strata: 2	(B)
5		-				
6					Percent of Dominant Species	
			= Total Cover		That Are OBL, FACW, or FAC:100%	(A/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1. None Observed					Total % Cover of: Multiply by:	
2					OBL species 108 x 1 = 108	
3		-			FACW species 0 x 2 = 0	
4					FAC species 0 x 3 = 0	
5					FACU species 0 x 4 = 0	
6.					UPL species 0 x 5 = 0	
		0	= Total Cover		Column Totals: 108 (A) 108	(B)
	50% of total cover:	0	20% of total cover:	0		``
Shrub Stratum (Plot size:			. —		Prevalence Index = B/A = 1.00	
1. None Observed						_
					Hydrophytic Vegetation Indicators:	
2.						
3					1 - Rapid Test for Hydrophytic Vegetation	
4					X 2 - Dominance Test is >50%	
5					X 3 - Prevalence Index is ≤ 3.0 ¹	
6					Problematic Hydrophytic Vegetation ¹ (Explain)	
			= Total Cover			
	50% of total cover:	0	20% of total cover:	0	Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)				be present, unless disturbed or problematic.	
1. Avicennia germinans		60	Yes	OBL	Definitions of Five Vegetation Strata:	
2. Salicornia bigelovii		35	Yes	OBL	Tree - Woody plants, excluding woody vines,	
3. Salicornia depressa		3	No	OBL	approximately 20 ft (6m) or more in height and 3 in.	
4. Distichlis spicata		10	No	OBL	(7.6 cm) or larger in diameter at breast height (DBH).	
5						
6					Sapling - Woody plants, excluding woody vines,	
7.					approximately 20 ft (6 m) or more in height and less	
8.					than 3 in. (7.6 cm) DBH.	
9.						
10.					Shrub - Woody plants, excluding woody vines,	
11.					approximately 3 to 20 ft (1 to 6 m) in height.	
		108	= Total Cover			
	50% of total cover:		20% of total cover:	21.6	Herb - All herbaceous (non-woody) plants, including	
Mandy Vina Stratum (Diet size)			20 % Of total cover.	21.0	herbaceous vines, regardless of size, and woody	
Woody Vine Stratum (Plot size:					plants, except woody vines, less than approximately	
1. None Observed					3 ft (1 m) in height.	
2					o it (1 m) in noight.	
3					Woody vine - All woody vines, regardless of height.	
4					Woody vine - All woody vines, regardless of height.	-
5						
		0	= Total Cover		Hydrophytic	
	50% of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes X No	
Remarks: (if observed, list m	orphological adaptat	ions below).			
A positive indication of hydror	hytia vagatatian was		(>EOO/ of dominant	anasias indas	ved as ORL FACIAL as FACI	
A positive indication of hydrop	onytic vegetation was	opserved	(>50% or dominant	species index	xeu as ODL, FACW, OF FAC).	
A 100 1 10 10 10 10 10 10 10 10 10 10 10			6	. 0		
A positive indication of hydrop	onytic vegetation was	observed	(Prevalence Index is	s ≤ 3.00).		

Sampling Point: DPA072_PEM

Depth (inches)	Matrix			Redox	Features			
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-5	10YR 5/2	98	10YR 4/6	2	C		Sandy Clay	
5-20	N 2.5	100	None				Clay	
 Type: C=Cc	oncentration, D=Dep	letion RM=	=Reduced Matrix N	 //S=Maske	ed Sand Grains	² I ocation: Pl	 L=Pore Lining, M=Matr	iy
	Indicators: (Appli					Location. Fi		lematic Hydric Soils ³ :
-		icable to al			Surface (S8) (L	DD C T III	1 cm Muck (A9	
Histosol	, ,				ce (S9) (LRR S ,		2 cm Muck (A1	, ,
	pipedon (A2)							
	istic (A3)			-	ineral (F1) (LRR	(0)		(F18) (outside MLRA 150A
	en Sulfide (A4)			Gleyed M	, ,			Iplain Soils (F19) (LRR P, S,
	d Layers (A5)	D T 11)		ed Matrix (ght Loamy Soils (F20)
	Bodies (A6) (LRR I			Dark Surf			(MLRA 153B)	torial (TEO)
	ucky Mineral (A7) (L				urface (F7)		Red Parent Ma	
	resence (A8) (LRR I	-		Depression				ark Surface (TF12)
	uck (A9) (LRR P, T)			10) (LRR	=	-40	Other (Explain	ın Remarks)
	d Below Dark Surfac	ce (A11)			(F11) (MLRA 1	-	31	Elevatera de Atra de Companyo de Atras de Companyo de Atras de Companyo de Atras de Companyo de Atras de Compa
	ark Surface (A12)			-	Masses (F12)			f hydrophytic vegetation and ology must be present,
	Prairie Redox (A16) (•	· —		(F13) (LRR P, T	, U)		bed or problematic.
	Mucky Mineral (S1) ((LRR O, S)			7) (MLRA 151)			'
	Gleyed Matrix (S4)				F18) (MLRA 15			
X Sandy R	Redox (S5)		Piedmo	ont Floodp	olain Soils (F19)	(MLRA 149A)		
Stripped	d Matrix (S6)		Anoma	lous Brigh	nt Loamy Soils (I	F20) (MLRA 149	9A, 153C, 153D)	
Type: Depth (inc						Hydric	: Soil Present? Yes	X No
						Hydric	: Soil Present? Yes	X No
Depth (inc						Hydric	: Soil Present? Yes	X No
Depth (inc						Hydric	Soil Present? Yes	X No
Depth (inc						Hydric	Soil Present? Yes	XNo
Depth (inc	ches):					Hydric	Soil Present? Yes	XNo
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No
Depth (inc	ches):					Hydric	Soil Present? Yes	X No

Project/Site:	Bluewater SPM	County:	Aransas	Sampling Date:	February 7, 2019
Applicant/Owner:	Lloyd Engineering		State:	Texas Sample Point:	•
Investigator(s): C.	Bailey and N.	Trivino Section, To	— ownship, Range:	N/A	
Landform (hillslope, terrace, e		Local relie	f (concave, convex, n	one): Concave Slope	e (%): 0-5
	None				Datum: North American Datum 1983
Soil Map Unit Name:		Beaches		NWI Classification:	PEM1A
Are climatic / hydrologic condit	tions on the site typical for this time	e of year? (Yes / No) YES	(if no, explain in Remarks.)	
Are Vegetation No	,Soil No, or Hydrology	No significantly distu	rbed? Are "Normal	Circumstances" present? Ye	es <u>X</u> No
Are Vegetation No	,Soil No ,or Hydrology	No naturally problem	natic? (If	needed, explain any answers i	n Remarks.)
SUMMARY OF FINDI	NGS - Attach site map sl	nowing sampling	point locations	s. transects. importar	nt features, etc.
		J - 1			
Hydrophytic Vegetation Pres	ent? Yes X No	'			
Hydric Soil Present?			Sampled Area	V V N	1.
Wetland Hydrology Present?	Yes X No	withi	n a Wetland?	Yes X N	lo
Remarks:					
	d to be within a wetland due to the	presence of all 3 wetla	nd criteria.		
HYDROLOGY Wetland by drale as a ladi	anto vo.				
Wetland hydrology Indi				Secondary Indicators (minin	· · · · ·
, ,	num of one is required; check all th	,		Surface Soil Cracks (,
X Surface Water (A1	· —	quatic Fauna (B13)		Sparsely Vegetated C	, ,
High Water Table	· · · —	arl Deposits (B15) (LRR		Drainage Patterns (B	•
Saturation (A3) Water Marks (B1)	 _	/drogen Sulfide Odor (C xidized Rhizospheres or	•	Moss Trim Lines (B16 Dry-Season Water Ta	·
Sediment Deposits		resence of Reduced Iror	- , ,	Crayfish Burrows (C8	, ,
Drift Deposits (B3)	· · · —	ecent Iron Reduction in	• •	Saturation Visible on	•
Algal Mat or Crust		nin Muck Surface (C7)	Tilled Colls (CO)	Geomorphic Position	, ,
Iron Deposits (B5)	· · —	ther (Explain in Remark	s)	Shallow Aquitard (D3)	, ,
	on Aerial Imagery (B7)	anci (Explain in Nomana	3)	X FAC-Neutral Test (D5	
Water-Stained Lea	- · · ·			Sphagnum moss (D8)	·
	(==)			pg(= -)	, (=, =-)
Field Observations:					
Surface Water Present?	YesX No	Depth (inches): 2			
Water Table Present?	Yes No X	Depth (inches): >20			
Saturation Present?	Yes NoX	Depth (inches): >20	Wetland Hy	drology Present? Yes	X No
(includes capillary fringe)					
Describe Recorded Data	(stream gauge, monitoring well, a	erial photos, previous in	spections), if available	e:	
Remarks:					
A positive indication of w	etland hydrology was observed (at	least one primary indica	ator)		
7 C POOLITO III GIOGIOTI OI W	onana nyarology wao oboorvou (al	rodot ono primary maiot	3.01).		

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
<u>Tree Stratum</u> (Plot size: 30	ft.)	% cover	Species?	Status	Number of Dominant Species	
1. None Observed			<u></u>		That Are OBL, FACW, or FAC:	(A)
						(,,)
2.					Total Number of Dominant	
3						(B)
4					Species Across All Strata: 1	(B)
5						
6					Percent of Dominant Species	
			= Total Cover		That Are OBL, FACW, or FAC:100%	(A/B)
	of total cover:	0	20% of total cover:	0	December of Index Westerness	
	<u>ft.</u>)				Prevalence Index Worksheet:	
1. None Observed					Total % Cover of: Multiply by:	
2					OBL species 75 x 1 = 75	
3					FACW species 0 x 2 = 0	
4			·		FAC species 0 x 3 = 0	
5					FACU species 0 x 4 = 0	
6					UPL species 0 x 5 = 0	
		0	= Total Cover		Column Totals: 75 (A) 75	(B)
50%	of total cover:	0	20% of total cover:	0		
Shrub Stratum (Plot size: 30					Prevalence Index = B/A = 1.00	
					Hydrophytic Vegetation Indicators:	
2					1 - Rapid Test for Hydrophytic Vegetation	
3				-	X 2 - Dominance Test is >50%	
4					X 3 - Prevalence Index is $\leq 3.0^{1}$	
5						
6					Problematic Hydrophytic Vegetation ¹ (Explain)	
			= Total Cover		1	
	of total cover:	0	20% of total cover:	0	¹ Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size: 30	<u>ft.</u>)				be present, unless disturbed or problematic.	
1. Distichlis spicata		75	Yes	OBL	Definitions of Five Vegetation Strata:	
2					Tree - Woody plants, excluding woody vines,	
3					approximately 20 ft (6m) or more in height and 3 in.	
4					(7.6 cm) or larger in diameter at breast height (DBH).	
5						
6					Sapling - Woody plants, excluding woody vines,	
7					approximately 20 ft (6 m) or more in height and less	
8					than 3 in. (7.6 cm) DBH.	
9						
10.					Shrub - Woody plants, excluding woody vines,	
11.					approximately 3 to 20 ft (1 to 6 m) in height.	
		 75	= Total Cover			
50%	of total cover:		20% of total cover:	15	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:					herbaceous vines, regardless of size, and woody	
1. None Observed	00 11				plants, except woody vines, less than approximately	
2.					3 ft (1 m) in height.	
					, ,	
3				-	Woody vine - All woody vines, regardless of height.	
4					Trocky time 7 in needy times, regulations of marginal	
5			- T-1-1 C-11-1		Hadron badio	
			= Total Cover	0	Hydrophytic	
50%	of total cover:	0	20% of total cover:	0	Vegetation	
					Present? Yes <u>X</u> No	
Remarks: (if observed, list morpho	logical adaptati	ons below).			
A positive indication of hydrophytic	vegetation was	observed	(>50% of dominant	species index	ed as OBL, FACW, or FAC).	
A positive indication of huder that	vogatati	oboc	(Dravalan la de : :	~ < 2.00\		
A positive indication of hydrophytic	vegetation was	DBVIBBOOD	(Frevalence index is	s ≥ 3.UU).		

Depth	Matrix			Redox F	eatures					
inches)	Color (moist)	%	Color (moist)	%_	Type ¹	Loc ²	Texture	Remarks		
0-3	10YR 3/1_	100	None				Silty Sand			
3-20	10YR 4/2	97	10YR 4/6	_3_	C	PL	Clay Loam			
	Concentration, D=De	nletion RM	1=Reduced Matrix M	—— —— IS=Masker		² Location: P	L=Pore Lining, M=Matrix			
	s Indicators: (Appl		·			Location: 1	Indicators for Proble			
Histoso	,	il cable to	•		Surface (S8) (L	RRSTU)	1 cm Muck (A9)			
	Epipedon (A2)				e (S9) (LRR S,		2 cm Muck (A10)	•		
	Histic (A3)				neral (F1) (LRR			F18) (outside MLRA 150A,B		
	gen Sulfide (A4)			Gleyed Ma	` , `	-,	Piedmont Floodplain Soils (F19) (LRR P, S, T)			
	ed Layers (A5)		X Deplete	•	` ,		Anomalous Bright Loamy Soils (F20)			
	, , ,	Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6)					(MLRA 153B)	()		
<u> </u>	/lucky Mineral (A7) (I			ed Dark Su	,		Red Parent Material (TF2)			
— Muck F	Presence (A8) (LRR	U)		Depression			Very Shallow Dark Surface (TF12)			
 1 cm N	fluck (A9) (LRR P, T)	Marl (F	10) (LRR l	رل) `		Other (Explain in Remarks)			
 Deplete	ed Below Dark Surfa	ce (A11)	Deplete	ed Ochric (F11) (MLRA 15	1)		,		
Thick [Dark Surface (A12)		Iron-Ma	nganese N	Masses (F12) (LRR O, P, T)	³ Indicators of I	nydrophytic vegetation and		
Coast	Prairie Redox (A16)	(MLRA 15	0A) Umbric	Surface (F	13) (LRR P, T ,	U)	wetland hydrology must be present,			
Sandy	Mucky Mineral (S1)	(LRR O, S) Delta C	chric (F17) (MLRA 151)		unless disturb	ed or problematic.		
Sandy	Gleyed Matrix (S4)		Reduce	ed Vertic (F	18) (MLRA 15	A, 150B)				
Sandy	Redox (S5)		Piedmo	nt Floodpl	ain Soils (F19)	(MLRA 149A)				
Strippe	ed Matrix (S6)		Anoma	lous Bright	Loamy Soils (F	20) (MLRA 14	9A, 153C, 153D)			
Dark S	Surface (S7) (LRR P,	S, T, U)								
Restrictive	Layer (if observed)):								
Type:										
Depth (ir	nches):					Hydri	c Soil Present? Yes _	X No		
Remarks:						!				
·	ndication of hydric so	9	- m I							

Project/Site:	Bluewater SPM	(County:	Aransas	Sa	ampling Date:	February 7, 2019
	Lloyd Engineer		Stat			_	DPA076_PEM
Investigator(s): C.	Bailey and 1	N. Trivino	Section, Township	o, Range:		N/A	
Landform (hillslope, terrace, etc			Local relief (conca	ave, convex, no	one): No	one Slop	e (%): 0-5
Subregion (LRR or MLRA):					' <u>-</u>	'.049351	Datum: North American Datum 1983
Soil Map Unit Name:		Beaches			NWI Classif	fication:	E2USN
Are climatic / hydrologic condition	ons on the site typical for this t	ime of year?	(Yes / No)	YES	_(if no, explai	in in Remarks.)	
Are Vegetation,	Soil No , or Hydrology	No signific	antly disturbed?	Are "Normal (Circumstances	" present? Y	es X No
Are Vegetation No,	Soil No ,or Hydrology	No natural	ly problematic?	(If r	needed, explai	in any answers	in Remarks.)
SUMMARY OF FINDIN	GS - Attach site man	showing sa	mpling poin	t locations	transect	s importa	nt features, etc.
	7 tituon oito map						
Hydrophytic Vegetation Prese		No					
Hydric Soil Present?	YesX	No	Is the Samp	led Area			
Wetland Hydrology Present?	YesX	No	within a We	tland?	Yes	X	No
·	to be within a wetland due to	the presence of	all 3 wetland crite	ria.			
HYDROLOGY Wetland budgeless India	anto was						
Wetland hydrology Indic							mum of two required)
	um of one is required; check al	,				ce Soil Cracks	, ,
Surface Water (A1)		Aquatic Fauna (Concave Surface (B8)
X High Water Table (A	A2)	Marl Deposits (I				age Patterns (E	•
Saturation (A3)		Hydrogen Sulfic	, ,	Doots(C2)		Trim Lines (B1	*
Water Marks (B1)	(P2)		spheres on Living	Roots(C3)		eason Water T	, ,
Sediment Deposits (Drift Deposits (B3)	(B2)	Presence of Re	duction in Tilled S	oile (C6)		ish Burrows (C	o) ı Aerial Imagery (C9)
Algal Mat or Crust (I	B4)	Thin Muck Surfa		olis (Co)		norphic Position	, ,
Iron Deposits (B5)		Other (Explain i	, ,			ow Aquitard (D3	, ,
	n Aerial Imagery (B7)	Other (Explain)	ii Keiliaiks)			Neutral Test (D	•
Water-Stained Leav						gnum moss (D8	*
Water-Stained Leav	(E3 (E3)				Opila(Jilaili illoss (DC)) (ERR 1, 0)
Field Observations:							
Surface Water Present?	/es NoX	Depth (inches	s): N/A				
	/es X No	Depth (inches	s): 10				
Saturation Present?	/es NoX	Depth (inches		Wetland Hy	drology Prese	ent? Yes _	X No
(includes capillary fringe)						_	
Describe Recorded Data (stream gauge, monitoring well	, aerial photos, p	revious inspection	ns), if available	:		
Remarks:							
A positive indication of we	tland hydrology was observed	(at least one prir	nary indicator).				
Aquatic Fauna: crabs.							

Sampling Point: DPA076_PEM

		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:	20 ft \	% cover		Status	Number of Dominant Species	
4 14 04 4		70 COVE	Species !	Status	·	۸,
	-		· — ·		That Are OBL, FACW, or FAC: 2 (^)
2			·			
3.			·		Total Number of Dominant	
4			<u> </u>		Species Across All Strata: 2 (B)
5						
6	 	-	. <u> </u>		Percent of Dominant Species	
			= Total Cover		That Are OBL, FACW, or FAC: 100% (A/B)
	50% of total cover:	0	20% of total cover:	0		
Sapling Stratum (Plot size:	30 ft.)				Prevalence Index Worksheet:	
1. None Observed			. <u> </u>		Total % Cover of: Multiply by:	
2			. <u> </u>		OBL species45 x 1 =45	
3			<u> </u>		FACW species 0 x 2 = 0	
4					FAC species 0 x 3 = 0	
5					FACU species 0 x 4 = 0	
6.			·		UPL species 0 x 5 = 0	
		0	= Total Cover		Column Totals: 45 (A) 45	— (B)
	50% of total cover:	0	20% of total cover:	0		— ` ´
Shrub Stratum (Plot size:			,		Prevalence Index = B/A = 1.00	
1. None Observed	,					_
2.			·		Hydrophytic Vegetation Indicators:	
3.			<u> </u>		1 - Rapid Test for Hydrophytic Vegetation	
					X 2 - Dominance Test is >50%	
4					X 3 - Prevalence Index is ≤ 3.0 ¹	
5.					Problematic Hydrophytic Vegetation ¹ (Explain)	
6					Problematic rrydrophytic vegetation (Explain)	
	500/ - 54-4-1		= Total Cover	0	The discrete control of the other control of the other terms of the ot	
Harly Otractions (District	50% of total cover:		20% of total cover:	0	Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size:	30 ft.)		.,		be present, unless disturbed or problematic.	
·		15		OBL_	Definitions of Five Vegetation Strata:	
2. Distichlis littoralis		30	Yes	OBL	Tree - Woody plants, excluding woody vines,	
3			<u> </u>		approximately 20 ft (6m) or more in height and 3 in.	
4			<u> </u>		(7.6 cm) or larger in diameter at breast height (DBH).	
5			<u> </u>			
6			<u> </u>		Sapling - Woody plants, excluding woody vines,	
7					approximately 20 ft (6 m) or more in height and less	
8			. <u> </u>		than 3 in. (7.6 cm) DBH.	
9						
10			. <u> </u>		Shrub - Woody plants, excluding woody vines,	
11			<u> </u>		approximately 3 to 20 ft (1 to 6 m) in height.	
		45	= Total Cover			
	50% of total cover:	22.5	20% of total cover:	9	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size:					herbaceous vines, regardless of size, and woody	
1. None Observed					plants, except woody vines, less than approximately	
2.			<u> </u>		3 ft (1 m) in height.	
3.						
4.					Woody vine - All woody vines, regardless of height.	
5.			<u> </u>			
o		0	= Total Cover		Hydrophytic	
	50% of total cover:			0	Vegetation	
	0070 01 10101 00101.				Present? Yes X No	
					11036III: 163 A NO	
Remarks: (if observed, list mo	ornhological adaptat	ions helow)			
•			,			
A positive indication of hydrop	hytic vegetation was	observed	(>50% of dominant	species index	ked as OBL, FACW, or FAC).	
A positive indication of hydrop	hytic vegetation was	hearved	(Prevalence Index is	s < 3 00\		
A positive indication of Hydrop	mydd vegetallon Was	, obscived	(i revalence muex is	J = J.∪U).		

Depth	Matrix			eatures							
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0-20	10YR 5/2	97	10YR 4/6_	_2_	C	PL	Sand				
0-20	N 2.5	_1_	None				Clay				
	Concentration, D=Dep					² Location: P	L=Pore Lining, M=Matr				
•	s Indicators: (Appl	icable to a	•		•			lematic Hydric Soils ³ :			
Histoso	` ,				Surface (S8) (LI		1 cm Muck (A9	•			
Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U							2 cm Muck (A1				
	Histic (A3)				neral (F1) (LRR	O)		(F18) (outside MLRA 150A,			
	gen Sulfide (A4)			Gleyed Ma				dplain Soils (F19) (LRR P, S,			
	ed Layers (A5)			ed Matrix (,			ght Loamy Soils (F20)			
	c Bodies (A6) (LRR			Dark Surfa	,		(MLRA 153B)				
5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7)							Red Parent Ma	, ,			
Muck Presence (A8) (LRR U) Redox Depressions (F8) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U)								ark Surface (TF12)			
	fluck (A9) (LRR P, T)				-	43	Other (Explain	in Remarks)			
	ed Below Dark Surfa	ce (A11)			[F11) (MLRA 15 Masses (F12) (I	-	3Indicators of	f hydrophytic vegetation and			
	Dark Surface (A12)	MI DA 450		ology must be present,							
Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U)							•	bed or problematic.			
	Mucky Mineral (S1)	(LKK U, S)			') (MLRA 151) -10) (ML DA 450	NA 450D)					
	Gleyed Matrix (S4)				=18) (MLRA 150	•					
	Redox (S5)			•	ain Soils (F19) (•	A 4500 450D)				
	ed Matrix (S6)	C T II)	Anoma	alous Brign	Loamy Solis (F	20) (NILKA 14	9A, 153C, 153D)				
Dark S	surface (S7) (LRR P,	3, 1, 0)									
Restrictive	Layer (if observed)	:									
Type:											
Depth (ir						Hydrid	Hudrin Sail Brocant? Von V No				
Deptii (ii	iches).					liyand	Hydric Soil Present? Yes X No				
Remarks:											
veillai ks.											
A positive in	ndication of hydric soi	l was obser	ved.								

Project/Site:	Bluewater SPM		City/County: Ar		IS	Sampling Date: _	2/7/2019	
Applicant/Owner:	P66				ate: TX	Sampling Point: _	DP-WET-01	
Investigator(s):	J. Wiedeman / C. Gerke	en S	Section, Township, Range:			NA		
Landform (hillslope, terrac	e, etc.): depressi	on, dunes L	ocal relief	(concave, convex, ı	none): concave	Slope	(%): <u>1-2%</u>	
Subregion (LRR or MLRA)	: Atlantic and Gulf Coa	st Lowland (LRR T)	_ Lat:	27.853894 Lo	ong: <u>-97.0426</u>	95 Datum:	NAD 83	
Soil Map Unit Name: Bead	hes, Psamments				NWI classifica	ation:		
Are climatic / hydrologic co	onditions on the site typic	al for this time of ye	ar? Yes _	X No (I	f no, explain in F	Remarks.)		
Are Vegetation, So	oil, or Hydrology	significantly	disturbed?	Are "Normal	Circumstances"	present? Yes _	X No	
Are Vegetation, So	oil, or Hydrology	naturally pr	oblematic?	(If needed, e	xplain any answ	ers in Remarks.)		
SUMMARY OF FIND	NGS – Attach site r	nap showing sa	ampling p	ooint locations,	transects, ir	nportant featur	es, etc.	
Hydrophytic Vegetatio	n Present? Yes	X No						
Hydric Soil Present?	-	No	_ \	the Sampled Are ithin a Wetland?		Y No		
Wetland Hydrology Pr	esent? Yes	XNo	_ **	ntilli a vvetialiu:	165	Yes <u>X</u> No		
HYDROLOGY								
Primary Indicators (mini X Surface Water (X High Water Tat. X Saturation (A3) Water Marks (B Sediment Depo Drift Deposits (I Algal Mat or Cru Iron Deposits (E X Inundation Visit Water-Stained (I Field Observations: Surface Water Presen	Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) X Surface Water (A1) X Aquatic Fauna (B13) X High Water Table (A2) Marl Deposits (B15) X Saturation (A3) Hydrogen Sulfide Odder Mydrogen Sulfide Odd				Surfa Spar X Drain Moss Cray Satu X Geor Shal X FAC Spha	ators (minimum of twace Soil Cracks (B6) sely Vegetated Condinage Patterns (B10) s Trim Lines (B16) Season Water Table (Tish Burrows (C8) ration Visible on Aermorphic Position (D2) low Aquitard (D3) -Neutral Test (D5) agnum moss (D8) (Lient? Yes X	cave Surface (B8) (C2) ial Imagery (C9) PRR T, U)	
Describe Recorded Da	ata (stream gauge, monit	oring well, aerial ph	otos, previo	ous inspections), if a	available:			
Remarks:								

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

EGETATION (Five Strata) – Use scientific name		Sampling Point: <u>DP-WET-01</u>			
	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 30-ft Radius)	% Cover	Species?	Status	Number of Dominant Species	
1. None Observed				That Are OBL, FACW, or FAC: (A)	
2				T. (1) (D.) (O.)	
3.				Total Number of Dominant2 Species Across All Strata: (B)	
4.				Species Across Air Strata (b)	
				Percent of Dominant Species	
				That Are OBL, FACW, or FAC: 100% (A/B)	
6.					
		= Total Co		Prevalence Index worksheet:	
50% of total cover: 0	20% of	total cover:	0	Total % Cover of: Multiply by:	
Sapling Stratum (Plot size: 15-ft Radius)				OBL species x 1 =	
1. None Observed				FACW species x 2 =	
2				FAC species x 3 =	
3				FACU species x 4 =	
4				UPL species x 5 =	
5.				Column Totals: (A) (B)	
6		T-4-1 O-		Prevalence Index = B/A =	
		= Total Co		Hydrophytic Vegetation Indicators:	
50% of total cover: 0	20% of	total cover:	0	X 1 - Rapid Test for Hydrophytic Vegetation	
Shrub Stratum (Plot size: 15-ft Radius)				X 2 - Dominance Test is >50%	
1. None Observed					
2				3 - Prevalence Test is ≤3.0¹	
3				Problematic Hydrophytic Vegetation ¹ (Explain)	
4.					
5.				¹ Indicators of hydric soil and wetland hydrology must	
6.				be present, unless disturbed or problematic.	
0		- Total Car		Definitions of Five Vegetation Strata:	
500/ 51 1 1		= Total Co		Too. Manda da alama a contration a construction	
50% of total cover: 0	20% of	total cover:	0	Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.	
Herb Stratum (Plot size: 5-ft Radius)				(7.6 cm) or larger in diameter at breast height (DBH).	
1. <u>Eleocharis sp.</u>	80	Y	OBL		
2. Schenoplectus pungens	20	Y	OBL	Sapling – Woody plants, excluding woody vines,	
3. <u>Hydrocotyle bonariensis</u>	5	N	FACW	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.	
4				than 3 in. (7.0 dil) DBH.	
5.				Shrub – Woody plants, excluding woody vines,	
6				approximately 3 to 20 ft (1 to 6 m) in height.	
				Harb. All harbassaus (non woody) plants, including	
	. ——			Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, <u>and</u> woody	
8				plants, except woody vines, less than approximately	
9				3 ft (1 m) in height.	
10				Mandersina Allerandersinan vanandlana af haimbt	
11				Woody vine – All woody vines, regardless of height.	
	105	= Total Co	ver		
50% of total cover: 52	20% of	total cover:	21		
Woody Vine Stratum (Plot size: 30-ft Radius)					
1. None Observed					
2.					
3.					
4	· 				
5	. ———			Hydrophytic	
	0	= Total Co	ver	Vegetation	
50% of total cover:0	20% of	total cover:	0	Present? Yes No	
Remarks:				1	

SOIL Sampling Point: <u>DP-WET-01</u>

Profile Desc	cription: (Describe t	o the depth ne	eded to docun	nent the in	dicator	or confirm	the absence of	findicators.)
Depth (inches)	Matrix	<u></u> %	Redo	ox Features		Loc ²	Toyturo	Domarko
(inches)	Color (moist)			<u>%</u>	Type ¹		<u>Texture</u>	Remarks
0-16	10YR 5/1	90_	7.5YR 6/4	10	<u>C</u>	M/PL	sand	
	-							
	<u> </u>							
	<u> </u>							
			-				·	_
	-							
¹ Type: C=C	oncentration, D=Depl	etion, RM=Red	uced Matrix, MS	S=Masked	Sand Gr	ains.	² Location: Pl	_=Pore Lining, M=Matrix.
	Indicators: (Applica	ble to all LRR	•		•			or Problematic Hydric Soils ³ :
	osol (A1)	-				(LRR S, T,		Muck (A9) (LRR O)
	c Epipedon (A2) k Histic (A3)	-	Thin Dark	Surrace (S9 cky Mineral				fluck (A10) (LRR S) ed Vertic (F18) (outside MLRA 150A,B)
	rogen Sulfide (A4)	-	Loamy Gle	•	. , .	.K O)		ont Floodplain Soils (F19) (LRR P, S, T)
	ified Layers (A5)	-	Depleted M	=	()			lous Bright Loamy Soils (F20)
Orga	nic Bodies (A6) (LRR F	P, T, U)	Redox Dar	k Surface (I	F6)		(M	LRA 153B)
	Mucky Mineral (A7) (L		Depleted D		` '			arent Material (TF2)
	k Presence (A8) (LRR I	J) _	Redox Dep	,	8)			hallow Dark Surface (TF12)
	i Muck (A9) (LRR P, T) eted Below Dark Surfac	- 	Marl (F10)	(LRR U) Ochric (F11)	/MI DA	151\	Other (Explain in Remarks)
	k Dark Surface (A12)	E (A11) _		, ,	•	(LRR O, P,	T) ³ Indicate	ors of hydrophytic vegetation and
	stal Prairie Redox (A16)	(MLRA 150A)			, ,		•	d hydrology must be present,
Sand	dy Mucky Mineral (S1) (RLRR O, S)	Delta Ochr	ic (F17) (MI	LRA, 151)	unless	distributed or problematic.
	dy Gleyed Matrix (S4)	-			•	50A, 150B)		
I	dy Redox (S5)	-			•	9) (MLRA 14	•	
·	ped Matrix (S6) : Surface (S7) (LRR P, :	- - T II)	Anomalous	s Bright Loa	my Soils	(F20) (MLR	A 149A, 153C, 15	53D)
		3, 1, 0)						
	Layer (if observed):							
Type:	achae):						Uvdria Cail Dras	sent? Yes <u>X</u> No
Remarks:	iches):						nyuric Soil Pres	sent? Yes <u>X</u> No
rtemarks.								
1								

Project/Site:	Bluewater SPN	И	City/Cou	nty:	Aransas		Sampling Date: _	2/7/2019
Applicant/Owner:								
	J. Wiedeman / C. Gerken							
Landform (hillslope, terr					_			(%): 1-2%
Subregion (LRR or MLF								
Soil Map Unit Name: Be					-		ation:	
Are climatic / hydrologic			ne of year? Yes	s X No			-	
Are Vegetation,							present? Yes _	Y No
-								<u> </u>
Are Vegetation,						-	ers in Remarks.)	
SUMMARY OF FIN	DINGS – Attach	site map showi	ing samplin	g point lo	cations, tra	nsects, ii	nportant featu	res, etc.
Hydrophytic Vegeta	ion Present?	Yes X No		lo the Cor	malad Araa			
Hydric Soil Present		Yes No		within a V	npled Area Vetland?	Yes	No <u>X</u>	
Wetland Hydrology	resent?	Yes No	X	within a v	vetiana:	103	NOX	
Remarks:								ļ
HYDROLOGY								
Wetland Hydrolog	Indicators				Soc	ondan/India	ators (minimum of tw	wo required)
	nimum of one is requir	red: check all that an	(vlac		<u>3ec</u>	•	ace Soil Cracks (B6)	
Surface Water			atic Fauna (B13)			sely Vegetated Con	•
High Water	able (A2)	Marl	Deposits (B15)	(LRR U)		X Drai	nage Patterns (B10))
Saturation (A	3)	Hydr	rogen Sulfide O	dor (C1)		Mos	s Trim Lines (B16)	
Water Marks	(B1)	Oxid	ized Rhizosphere	es along Livin	g Roots (C3)	Dry-	Season Water Table	(C2)
Sediment De			sence of Reduce	` '			fish Burrows (C8)	
Drift Deposit	• •			on Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)				
Algal Mat or				ck Surface (C7) Geomorphic Position (D2)				
Iron Deposits	(Bວ) sible on Aerial Imagery	·	er (Explain in Re	emarks)		·	low Aquitard (D3) -Neutral Test (D5)	
	d Leaves (B9)	/ (B/)					agnum moss (D8) (L	RR T, U)
Field Observations	. ,						3 (-7(, - ,
Surface Water Pres		No Depth	(inches):					
Water Table Preser	? Yes	No Depth	(inches):					
Saturation Present?		No Depth			Wetland Hydr	ology Pres	ent? Yes	No <u>X</u>
(includes capillary fi								
Describe Recorded	Data (stream gauge,	monitoring well, ae	erial photos, pre	evious inspe	ections), if availa	able:		
Remarks:								
i tomanto.								

EGETATION (Five Strata) – Use scientific name	es of plant	S.		Sampling Point: <u>UDP-WET-01</u>
	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30-ft Radius</u>)	% Cover	Species?	Status	Number of Dominant Species
None Observed				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant2
3				Species Across All Strata: (B)
4				(=)
5.				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: (A/B)
·		= Total Co	ver	Decorded to decorate back
50% of total cover: 0				Prevalence Index worksheet:
	20 % 01	iolai covei.		Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 15-ft Radius)				OBL species x 1 =
1. None Observed	· 			FACW species x 2 =
2				FAC species x 3 =
3	· ——			FACU species x 4 =
4				UPL species x 5 =
5				Column Totals: (A) (B)
6				
	0	= Total Co	ver	Prevalence Index = B/A =
50% of total cover:0	20% of	total cover:	0	Hydrophytic Vegetation Indicators:
Shrub Stratum (Plot size: 15-ft Radius)				1 - Rapid Test for Hydrophytic Vegetation
4 11 01				X 2 - Dominance Test is >50%
•				3 - Prevalence Test is ≤3.0¹
2.				Problematic Hydrophytic Vegetation ¹ (Explain)
3.				
4				¹ Indicators of hydric soil and wetland hydrology must
5				be present, unless disturbed or problematic.
6				Definitions of Five Vegetation Strata:
	0	= Total Co	ver	Dominiono or rivo rogonation otrata.
50% of total cover: 0	20% of	total cover:	0	Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 5-ft Radius)				approximately 20 ft (6 m) or more in height and 3 in.
1. <u>Andropogon virginicus</u>	50	Y	_FAC	(7.6 cm) or larger in diameter at breast height (DBH).
2. Andropogon glomeratus		N		Sapling – Woody plants, excluding woody vines,
3. Schizachyrium scoparium		N		approximately 20 ft (6 m) or more in height and less
4				than 3 in. (7.6 cm) DBH.
				Shrub – Woody plants, excluding woody vines,
0				approximately 3 to 20 ft (1 to 6 m) in height.
6.				
7	· ——			Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
8				plants, except woody vines, less than approximately
9				3 ft (1 m) in height.
10				
11				Woody vine – All woody vines, regardless of height.
	90	= Total Co	ver	
50% of total cover: 45	20% of	total cover:	18	
Woody Vine Stratum (Plot size: 30-ft Radius)				
,				
1. None Observed 2.				
3				
4				
5				Hydrophytic
	0	= Total Co	ver	Vegetation
50% of total cover:0	20% of	total cover:	0	Present? YesX No
Remarks: Facultative salt prairie grasses				1
assissing said granto granto				

SOIL Sampling Point: <u>UDP-WET-01</u>

Depth	Matrix	0/		ox Features		12	T 4	Demonto
(inches)	Color (moist)		Color (moist)		Type ¹	Loc ²	Texture	Remarks
0-16	10YR 6/2	99	10YR 5/6	1	<u> </u>	<u> </u>	sand	
	-							
				. .				
	oncentration, D=Dep					ains.		_=Pore Lining, M=Matrix.
•	Indicators: (Applic	able to all LRR	•		•	/LDD 0 T L		or Problematic Hydric Soils ³ :
	sol (A1) c Epipedon (A2)	·-	Polyvalue Thin Dark		` '			luck (A9) (LRR O) luck (A10) (LRR S)
	K Histic (A3)	·-		cky Mineral				ed Vertic (F18) (outside MLRA 150A,B)
	ogen Sulfide (A4)	-		eyed Matrix (,		ont Floodplain Soils (F19) (LRR P, S, T)
	ified Layers (A5)	·-	Depleted N	-	,			lous Bright Loamy Soils (F20)
	nic Bodies (A6) (LRR		Redox Dar	k Surface (F	- 6)		(M	LRA 153B)
	Mucky Mineral (A7) (I			Dark Surface	` '		·	arent Material (TF2)
	Presence (A8) (LRR	,		oressions (F	8)			hallow Dark Surface (TF12)
	Muck (A9) (LRR P, T) eted Below Dark Surfa		Marl (F10)	(LRR U) Ochric (F11)	(MI RA	151)	Other (Explain in Remarks)
	cted Below Bank Gand (Dark Surface (A12)			,	•	(LRR O, P, ⁻	T) ³ Indicato	ors of hydrophytic vegetation and
	stal Prairie Redox (A16	6) (MLRA 150A)		rface (F13)	, ,		•	d hydrology must be present,
Sand	ly Mucky Mineral (S1)		Delta Ochr					distributed or problematic.
Sand	ly Gleyed Matrix (S4)		Reduced \	/ertic (F18)	(MLRA 1	50A, 150B)		
	ly Redox (S5)	-		•	•) (MLRA 149	,	
	ped Matrix (S6)	C T II)	Anomalous	s Bright Loa	my Soils	(F20) (MLR	A 149A, 153C, 15	53D)
<u> </u>	Surface (S7) (LRR P,							
_	Layer (if observed):							
Type:	ah a a \.					١.	luduia Cail Duan	namt2 Van Na V
Remarks:	ches):						iyaric Soli Pres	sent? Yes No <u>X</u>
Remarks.								

Projec	ct/Site:	Bluewater SPN	1	City/Cou	nty:	Aransas		Sampling Date: _	2/7/2019
Applic	cant/Owner:		P66			State:	TX	Sampling Point: _	DP-WET-02
Invest	tigator(s):	J. Wiedeman / C.	Gerken	Section,	Township, R	ange:		NA	
Landfo	orm (hillslope, terrace	e, etc.): der	oression, dunes	Local rel	ef (concave,	convex, none): concave	Slope	(%): <u>1-2%</u>
Subre	egion (LRR or MLRA)	: Atlantic and Gu	lf Coast Lowlan	nd (LRR T) Lat:	27.85282	8 Long: _	-97.04543	37 Datum:	NAD 83
Soil M	lap Unit Name: Beac	hes, Psamments_				N\	VI classifica	tion:	
Are cli	imatic / hydrologic co	onditions on the site	typical for this	time of year? Yes	<u> X</u> No	(If no,	explain in F	Remarks.)	
Are V	egetation, Sc	oil, or Hydr	ologys	ignificantly disturb	ed? Are	"Normal Circ	umstances"	present? Yes _	X No
Are V	egetation, Sc	oil, or Hydr	ology n	aturally problemat	ic? (If r	needed, explai	n any answ	ers in Remarks.)	
SUM	MARY OF FINDI	NGS – Attach s	site map sho	owing samplin	g point lo	cations, tra	nsects, ir	nportant featu	res, etc.
H	ydrophytic Vegetatior	n Present?	Yes X	No					
H	ydric Soil Present?		Yes X		Is the Sam within a W	•	Yes	X No	
	/etland Hydrology Pre emarks:	esent?	Yes X	No	within a v	ctiuiiu.	100 <u>X</u> 110 <u></u>		
HYD	ROLOGY								
	Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) X Surface Water (A1) X Aquatic Fa X High Water Table (A2) Marl Depos X Saturation (A3) Hydrogen S Water Marks (B1) X Oxidized Ri Sediment Deposits (B2) X Presence of Presence of Presence of S Drift Deposits (B3) Recent Iron X Algal Mat or Crust (B4) Thin Muck				· , ,				
Sı W Sa	ield Observations: urface Water Present? tater Table Present? aturation Present? ncludes capillary fring	Yes <u>X</u> Yes <u>X</u>	No De	epth (inches):epth (inches):epth (inches):	4	Vetland Hydr	ology Pres	ent? Yes <u>X</u>	No
De	escribe Recorded Da	ita (stream gauge,	monitoring well	l, aerial photos, pre	evious inspec	tions), if availa	able:		
	emarks: /etland area along le\	/ee, some areas of	deeper surface	e water throughout					

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

EGETATION (Five Strata) – Use scientific name	s of plant	S.		Sampling Point: <u>DP-WET-02</u>		
	Absolute	Dominant	Indicator	Dominance Test worksheet:		
<u>Tree Stratum</u> (Plot size: <u>30-ft Radius</u>)	% Cover	Species?	Status	Number of Dominant Species		
1. None Observed				That Are OBL, FACW, or FAC: (A)		
2				Total Niverhau of Daminaut?		
3				Total Number of Dominant2 Species Across All Strata: 2 (B)		
4						
5.				Percent of Dominant Species		
6.				That Are OBL, FACW, or FAC:100% (A/B)		
<u> </u>		= Total Co	ver	Dravalanas Indoversalis hasti		
50% of total cover:0				Prevalence Index worksheet:		
	20 /0 01	iolai covei.		Total % Cover of: Multiply by:		
Sapling Stratum (Plot size: 15-ft Radius)				OBL species x 1 =		
1. None Observed				FACW species x 2 =		
2				FAC species x 3 =		
3				FACU species x 4 =		
4				UPL species x 5 =		
5				Column Totals: (A) (B)		
6						
	0	= Total Co	ver	Prevalence Index = B/A =		
50% of total cover: 0	20% of	total cover:	0	Hydrophytic Vegetation Indicators:		
Shrub Stratum (Plot size: 15-ft Radius)				X 1 - Rapid Test for Hydrophytic Vegetation		
1. None Observed				X 2 - Dominance Test is >50%		
2.				3 - Prevalence Test is ≤3.0 ¹		
3.				Problematic Hydrophytic Vegetation¹ (Explain)		
4.						
5.				¹ Indicators of hydric soil and wetland hydrology must		
				be present, unless disturbed or problematic.		
6		- Total Car		Definitions of Five Vegetation Strata:		
500/ -ft-t-l		= Total Co		Tree Meady plants avalyding was divising		
50% of total cover: 0		Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.				
Herb Stratum (Plot size: 5-ft Radius)				(7.6 cm) or larger in diameter at breast height (DBH).		
1. <u>Eleocharis sp.</u>		<u>N</u>				
2. <u>Schenoplectus pungens</u>		Y		Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less		
3. <u>Hydrocotyle bonariensis</u>		<u>N</u>		than 3 in. (7.6 cm) DBH.		
4. Borrichia frutescens	15	N	OBL	, ,		
5. <u>Spartina patens</u>	30	Y	FACW	Shrub – Woody plants, excluding woody vines,		
6. <u>Juncus roemerianus</u>	5	N	OBL	approximately 3 to 20 ft (1 to 6 m) in height.		
7				Herb – All herbaceous (non-woody) plants, including		
8				herbaceous vines, regardless of size, <u>and</u> woody		
9				plants, except woody vines, less than approximately 3 ft (1 m) in height.		
10				on (1 m) in neight.		
11.				Woody vine – All woody vines, regardless of height.		
		= Total Co	ver			
50% of total cover: 52						
Woody Vine Stratum (Plot size: 30-ft Radius)	20 /0 01	total cover.				
`						
1. None Observed						
2						
3						
4						
5				Hydrophytic		
	0	= Total Co	ver	Vegetation		
50% of total cover:0	20% of	total cover:	0	Present? YesX No		
Remarks:				1		

SOIL Sampling Point: <u>DP-WET-02</u>

Profile Desc	cription: (Describe	to the depth i	needed to docur	nent the ir	ndicator	or confirm	m the absence of	findicators.)
Depth (inches)	Matrix Color (moist)	%	Redo Color (moist)	ox Features	Type ¹	Loc ²	Texture	Remarks
0-4	10YR 3/1	90	10YR 5/6	10	C	M/PL	sand	
4-16	10YR 5/1	90	10YR 4/6	10	C	M/PL	sand	
			_					_
¹Type: C=Ce	oncentration, D=Dep	letion, RM=Re	educed Matrix, M	S=Masked	Sand G	ains.	² Location: Pl	_=Pore Lining, M=Matrix.
	Indicators: (Applic							or Problematic Hydric Soils ³ :
-	sol (A1)		Polyvalue		•	(LRR S, T,		luck (A9) (LRR O)
Histic	Epipedon (A2)		Thin Dark	Surface (S9) (LRR S	i, T, U)	2 cm N	luck (A10) (LRR S)
	Histic (A3)			cky Mineral		(R O)	· · · · · · · · · · · · · · · · · · ·	ed Vertic (F18) (outside MLRA 150A,B)
	ogen Sulfide (A4)			eyed Matrix	(F2)		· · · · · · · · · · · · · · · · · · ·	ont Floodplain Soils (F19) (LRR P, S, T)
	fied Layers (A5)		Depleted N	, ,	- 0\			lous Bright Loamy Soils (F20)
	nic Bodies (A6) (LRR Mucky Mineral (A7) (I		· <u></u>	k Surface (I	,			LRA 153B)
	: Presence (A8) (LRR			Dark Surface pressions (F	` '		·	arent Material (TF2) hallow Dark Surface (TF12)
	Muck (A9) (LRR P, T)		Marl (F10)	•	0)			Explain in Remarks)
	eted Below Dark Surfa			Ochric (F11)	(MLRA	151)	0.1101 (explain in romano)
	Dark Surface (A12)	,		anese Mass	•	,	P, T) ³ Indicate	ors of hydrophytic vegetation and
				rface (F13)	(LRR P,	T, U)	wetland	d hydrology must be present,
	y Mucky Mineral (S1)	(RLRR O, S)	Delta Ochi	ric (F17) (M I	LRA, 151)	unless	distributed or problematic.
	y Gleyed Matrix (S4)		Reduced \	/ertic (F18)	(MLRA 1	50A, 150B	3)	
	y Redox (S5)			Floodplain S	•	, ,	,	
	oed Matrix (S6)	O T 11)	Anomalous	s Bright Loa	my Soils	(F20) (MLI	RA 149A, 153C, 15	53D)
	Surface (S7) (LRR P,	<u> </u>						
_	Layer (if observed):							
Type:	-h) ·						Under Call Deca	ant2 Van V Na
Remarks:	ches):						nyaric Soli Pres	sent? Yes <u>X</u> No
itelliaiks.								

Project/Site:	Blu	ewater SPM	<u> </u>		City/Cou	nty:	Aransas		_ Sampling Date:	2/7/2019	
Applicant/Owner:			P66	3			State	: <u>TX</u>	_ Sampling Point:	UDP-WET-02	
Investigator(s):	J. Wiedeman / C. Gerken			Section,	Township,	Range:		NA			
Landform (hillslope,	terrace, etc.):	<u> </u>	hillslope		Local reli	ef (concav	e, convex, non	e): <u> </u>	onvex Slope	· (%): <u>1-2%</u>	
Subregion (LRR or M	/ /ILRA): Atla	ntic and Gul	f Coast Low	land (LRR 1	Γ) Lat:	27.852	75 Lona:	-97.0451	1 Datum:	NAD 83	
Soil Map Unit Name:							_		cation:		
Are climatic / hydrolo					ear? Yes	: X N					
	_									V No	
Are Vegetation				-					s" present? Yes _	<u>X</u> NO	
Are Vegetation	, Soll	, or Hydro	ology	naturally p	roblemat	ic? (I	r needed, expla	ain any ans	wers in Remarks.)		
SUMMARY OF F	INDINGS -	- Attach s	ite map s	howing s	amplin	g point l	ocations, tra	ansects, i	important featu	res, etc.	
Hydrophytic Veg	etation Prese	ent?	Yes X	No		la tha Ca					
Hydric Soil Prese	ent?		Yes				the Sampled Area ithin a Wetland? Yes NoX				
Wetland Hydrolo	gy Present?	,	Yes	NoX		within a	vvetianu :	165	NOX		
Remarks:											
HADBOI OCA											
HYDROLOGY											
Wetland Hydrol							<u>Se</u>		cators (minimum of t		
Primary Indicators	-	one is require				\			face Soil Cracks (B6 arsely Vegetated Cor	•	
Surface V			· · · · · · · · · · · · · · · · · · ·	Aquatic Fa Marl Depo					aisely vegetated Col ainage Patterns (B10)		
Saturation									ss Trim Lines (B16)	,	
Water Ma							ng Roots (C3)		-Season Water Table	e (C2)	
	Deposits (B2))				d Iron (C4)	. ,	Cra	yfish Burrows (C8)	. ,	
Drift Depo	osits (B3)			Recent Iro	n Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)						
Algal Mat	or Crust (B4)			Thin Muck	ck Surface (C7) Geomorphic Position (D2)					2)	
Iron Depo				Other (Exp	olain in Re	marks)		· · · · · · · · · · · · · · · · · · ·	allow Aquitard (D3)		
	n Visible on A		(B7)						C-Neutral Test (D5)	I DD T III	
	ained Leaves ((Ba)						Spr	nagnum moss (D8) (I	_RR I, U)	
Field Observation			NI-	Danath (in als	> -						
Surface Water P Water Table Pre	resent?	res	No No	Depth (inch	ies):						
Saturation Prese			No				Wetland Hyd	rology Pre	sent? Yes	No X	
(includes capillar				Dopur (inor			•				
Describe Record	ed Data (stre	am gauge, r	monitoring w	ell, aerial p	hotos, pre	evious insp	ections), if avai	ilable:			
Remarks:											

		Dominant		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30-ft Radius</u>)	% Cover	Species?	Status	Number of Dominant Species
1. None Observed				That Are OBL, FACW, or FAC: (A)
2				Total Number of Deminant?
3				Total Number of Dominant2 Species Across All Strata: 2 (B)
4.				Openies 7 to 1035 7 til Ottata.
				Percent of Dominant Species
•				That Are OBL, FACW, or FAC:100% (A/B)
6		T + + 0		
	0			Prevalence Index worksheet:
50% of total cover: 0	20% of t	otal cover:	0	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 15-ft Radius)				OBL species x 1 =
1. None Observed				FACW species x 2 =
2				FAC species x 3 =
3				FACU species x 4 =
4.				UPL species x 5 =
				Column Totals: (A) (B)
•				(-)
6				Prevalence Index = B/A =
		= Total Cov		Hydrophytic Vegetation Indicators:
50% of total cover:0	20% of t	otal cover:	0	
Shrub Stratum (Plot size: 15-ft Radius)				1 - Rapid Test for Hydrophytic Vegetation
1. None Observed				X 2 - Dominance Test is >50%
2				3 - Prevalence Test is ≤3.0 ¹
3.				Problematic Hydrophytic Vegetation ¹ (Explain)
4.				
				¹ Indicators of hydric soil and wetland hydrology must
5				be present, unless disturbed or problematic.
6				Definitions of Five Vegetation Strata:
		= Total Cov		
50% of total cover:0	20% of t	otal cover:	0	Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 5-ft Radius)				approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
1. Andropogon virginicus	30	<u> </u>	FAC	(7.0 cm) of larger in diameter at breast neight (DDH).
2. Andropogon glomeratus		Y		Sapling – Woody plants, excluding woody vines,
3. Rhynchospora colorata		N		approximately 20 ft (6 m) or more in height and less
Spartina patens		N		than 3 in. (7.6 cm) DBH.
		N		Shrub – Woody plants, excluding woody vines,
5. <u>Shenoplectus robustus</u>		IN	OBL	approximately 3 to 20 ft (1 to 6 m) in height.
6				
7				Herb – All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, <u>and</u> woody plants, except woody vines, less than approximately
9				3 ft (1 m) in height.
10.				o it (1 m) in noight.
11.				Woody vine - All woody vines, regardless of height.
···	90	= Total Cov		
50% of total cover: 45				
50% of total cover: <u>45</u>	20% 01 0	otal cover.	10	
Woody Vine Stratum (Plot size: 30-ft Radius)				
1. None Observed				
2				
3				
4.		_	-	
5				
·		= Total C	ıor	Hydrophytic
		= Total Cov		Vegetation
50% of total cover: 0	20% of t	otal cover:	0	Present? Yes X No
Remarks: Facultative salt prairie grasses				•

Sampling Point: <u>UDP-WET-02</u>

SOIL Sampling Point: <u>UDP-WET-02</u>

Profile Desc	cription: (Describe	to the depth n	needed to docun	nent the ir	ndicator	or confirm	the absence o	of indicators.)
Depth (inches)	Matrix Color (moist)	<u></u> %	Redo	x Features %	s Type ¹	Loc ²	Texture	Remarks
0-16	10YR 5/3	90	10YR 5/6		<u>Type</u>		sand	Nemarks
<u> </u>	101K 5/3	90	10113/6			IVI	Sanu	
-								
-								
			_					
17			alore and NA admires NAC		01-0		21 #	N. Dana Lining M. Matrix
	oncentration, D=Dep	•	•			ains.		PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
_	Indicators: (Applications)	able to all LRI	•		•	LRR S, T, L		Muck (A9) (LRR O)
	Epipedon (A2)		Thin Dark \$			•		Muck (A10) (LRR S)
Black	K Histic (A3)		Loamy Mud					ced Vertic (F18) (outside MLRA 150A,B)
	ogen Sulfide (A4)		Loamy Gle	yed Matrix	(F2)			ont Floodplain Soils (F19) (LRR P, S, T)
l	ified Layers (A5)		Depleted M	, ,				alous Bright Loamy Soils (F20)
_	nic Bodies (A6) (LRR		Redox Dar	•	,		•	MLRA 153B) arent Material (TF2)
	Mucky Mineral (A7) (L r Presence (A8) (LRR		Depleted D		` '			Shallow Dark Surface (TF12)
l	Muck (A9) (LRR P, T)	,	Marl (F10)	,	0)			(Explain in Remarks)
Depl	eted Below Dark Surfa	ce (A11)	Depleted C	, ,	•	,		
	Dark Surface (A12)					(LRR O, P,		tors of hydrophytic vegetation and
l	stal Prairie Redox (A16							nd hydrology must be present,
l	ly Mucky Mineral (S1) ly Gleyed Matrix (S4)	(RLRR O, S)	Delta Ochr	` , `	,) 50A, 150B)		s distributed or problematic.
l	ly Redox (S5)				•) (MLRA 149		
	ped Matrix (S6)				,	, ,	A 149A, 153C, 1	53D)
Dark	Surface (S7) (LRR P,	S, T, U)						
Restrictive	Layer (if observed):							
Type:								
Depth (in	ches):					ŀ	Hydric Soil Pre	sent? Yes No <u>X</u>
Remarks:								

Project/Site:	Bluewater SPM	C	City/County:	Aransas		Sampling Date: _	2/7/2019		
Applicant/Owner:	P66				TX	Sampling Point: _	DP-WET-03		
Investigator(s):	J. Wiedeman / C. Gerken		Section, Township, Range:			NA			
Landform (hillslope, terrac	e, etc.): depressi	on, dunes L	ocal relief (conca	ve, convex, none): concave_	Slope	(%): <u>1-2%</u>		
Subregion (LRR or MLRA): Atlantic and Gulf Coa	st Lowland (LRR T)	_ Lat: <u>27.85</u> 2	2774 Long:	-97.04675	<u>2</u> Datum:	NAD 83		
Soil Map Unit Name: Bea	ches, Psamments			N\	VI classifica	tion:			
Are climatic / hydrologic c	onditions on the site typic	al for this time of yea	ar? Yes <u>X</u>	No (If no,	explain in R	temarks.)			
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No									
Are Vegetation, S	oil, or Hydrology	naturally pro	oblematic?	(If needed, explain	n any answe	ers in Remarks.)			
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.									
Hydrophytic Vegetatio	n Present? Yes	X No							
Hydric Soil Present?		X No		ampled Area Wetland?	Vec '	Y No			
Wetland Hydrology Pr Remarks:	esent? Yes	<u>X</u> No	_ within a	i wetianu :	Yes <u>X</u> No				
HYDROLOGY									
Primary Indicators (min X Surface Water X High Water Tal X Saturation (A3) Water Marks (E Sediment Depo Drift Deposits (X Algal Mat or Cr Iron Deposits (I X Inundation Visi Water-Stained Field Observations: Surface Water Preser	Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) X Surface Water (A1) X Aquatic Fauna (B1:				Surfa Spars X Drain Moss Dry-S Crayl Satur X Geor Shall X FAC- Spha	ators (minimum of two ace Soil Cracks (B6) sely Vegetated Concurage Patterns (B10) soft Trim Lines (B16) Season Water Table fish Burrows (C8) ration Visible on Aerimorphic Position (D2) ow Aquitard (D3) -Neutral Test (D5) agnum moss (D8) (Linear Yes X	cave Surface (B8) (C2) ial Imagery (C9) PRR T, U)		
Describe Recorded Da	ata (stream gauge, monit	oring well, aerial pho	otos, previous ins	pections), if avail	able:				
Remarks:									

EGETATION (Five Strata) – Use scientific nam	es of plant	S.		Sampling Point: <u>DP-WET-03</u>				
	Absolute	Dominant	Indicator	Dominance Test worksheet:				
<u>Tree Stratum</u> (Plot size: <u>30-ft Radius</u>)	% Cover	Species?	Status	Number of Dominant Species				
1. None Observed				That Are OBL, FACW, or FAC:	4	(A)		
2				Total Number of Dominant2				
3				Species Across All Strata:	4	(B)		
4				'		. ()		
5.				Percent of Dominant Species				
6.				That Are OBL, FACW, or FAC:	100%	(A/B)		
·		= Total Co	ver	Barrelana da da como ella la cata				
50% of total cover:0				Prevalence Index worksheet:				
	2070 01	total cover.		Total % Cover of:				
Sapling Stratum (Plot size: 15-ft Radius)				OBL species				
1. None Observed				FACW species				
2.				FAC species				
3				FACU species				
4				UPL species				
5	_			Column Totals:	(A)	(B)		
6								
	0	= Total Co	ver	Prevalence Index = B/A =		_		
50% of total cover:0	20% of	total cover:	0	Hydrophytic Vegetation Indic				
Shrub Stratum (Plot size: 15-ft Radius)			_	X 1 - Rapid Test for Hydro	. ,	tion		
1. None Observed				X 2 - Dominance Test is >				
2.				3 - Prevalence Test is ≤				
3.		· · · <u></u>		Problematic Hydrophytic	c Vegetation¹ (Explain)		
·				¹ Indicators of hydric soil and w	etland hydrolo	gy must		
5		· ——		be present, unless disturbed or	problematic.			
6				Definitions of Five Vegetation	n Strata:			
		= Total Co						
50% of total cover:0) 20% of	total cover:		Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).				
Herb Stratum (Plot size: <u>5-ft Radius</u>)								
1. <u>Eleocharis sp.</u>	10	<u>N</u>	OBL	(*** ****, ** ****, ****	.	()-		
2. Schenoplectus pungens	15	<u> </u>	OBL	Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less				
3. Hydrocotyle bonariensis	5	N	FACW	than 3 in. (7.6 cm) DBH.	ore in neignt ar	ia iess		
4. Borrichia frutescens	30	Y	OBL	Than o in: (7.0 cm) BBH.				
5. <u>Spartina patens</u>	15	Y	FACW	Shrub – Woody plants, exclud		s,		
6. Juncus roemerianus		Υ		approximately 3 to 20 ft (1 to 6	m) in height.			
7. Andropogon glomeratus		N		Herb – All herbaceous (non-wo	ody) plants in	cludina		
8.		·		herbaceous vines, regardless of				
9.				plants, except woody vines, les	s than approxi	mately		
				3 ft (1 m) in height.				
10				Woody vine – All woody vines	regardless of	height		
11				/	,			
		= Total Co						
50% of total cover: <u>4</u>	<u>/</u> 20% of	total cover:	<u>19</u>					
Woody Vine Stratum (Plot size: 30-ft Radius)								
1. None Observed	_							
2								
3								
4								
5.		<u></u>						
	0	= Total Co	ver	Hydrophytic				
50% of total cover:0				Vegetation Present? Yes X	No			
	20 /0 01	iolai covel.		1 163 <u>V</u>		_		
Remarks:								

SOIL Sampling Point: <u>DP-WET-03</u>

Profile Desc	cription: (Describe	to the depth	needed to docum	nent the ir	ndicator	or confir	m the absence of i	indicators.)
Depth	Matrix			x Features				5 .
(inches)	Color (moist)	<u>%</u> _	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
<u>0-6</u>	5Y 5/1C	90	Gley 1 5/5y 1		C		<u>sand</u>	_
6-16	10YR 6/4	90	Gley 1 5/5y 1	10	C	M/PL	sand	
¹Tvpe: C=C	oncentration, D=Dep	letion. RM=Re	educed Matrix. MS	=Masked	Sand Gr	ains.	² Location: PL=	=Pore Lining, M=Matrix.
7.	Indicators: (Applic							r Problematic Hydric Soils³:
_	sol (A1)		Polyvalue E		•	(LRR S, T,		ick (A9) (LRR O)
Histic	Epipedon (A2)		Thin Dark S	Surface (S9) (LRR S	s, T, U)	2 cm Mu	ıck (A10) (LRR S)
Black	(Histic (A3)		Loamy Mud	ky Mineral	(F1) (LR	RO)	Reduced	d Vertic (F18) (outside MLRA 150A,B)
	ogen Sulfide (A4)		Loamy Gle		(F2)		· · · · · · · · · · · · · · · · · · ·	nt Floodplain Soils (F19) (LRR P, S, T)
	ified Layers (A5)		Depleted M	` '	- 0\		· · · · · · · · · · · · · · · · · · ·	ous Bright Loamy Soils (F20)
_	nic Bodies (A6) (LRR		Redox Dark	•	,		•	.RA 153B) ent Material (TF2)
	Mucky Mineral (A7) (L Presence (A8) (LRR		Redox Dep		, ,			allow Dark Surface (TF12)
	Muck (A9) (LRR P, T)	•	Marl (F10)	•	0)			explain in Remarks)
	eted Below Dark Surfa		Depleted O		(MLRA	151)		,
Thick	Dark Surface (A12)		Iron-Manga	nese Mass	ses (F12)	(LRR O, P	P, T) ³ Indicator	s of hydrophytic vegetation and
	stal Prairie Redox (A16	, ,) Umbric Sur	face (F13)	(LRR P,	T, U)		hydrology must be present,
	ly Mucky Mineral (S1)	(RLRR O, S)	Delta Ochri	. , .	-	•		istributed or problematic.
	ly Gleyed Matrix (S4)		Reduced V		•		•	
	ly Redox (S5) ped Matrix (S6)		Piedmont F	•	•	, ,	[,] 49A) RA 149A, 153C, 153	en)
	Surface (S7) (LRR P ,	S. T. U)	Anomalous	Dright Loa	iiiiy Oolis	(1 20) (NIL	1434, 1330, 133	,,,,,
		<u> </u>						
_	Layer (if observed):							
Type:	ches):						Hydric Sail Bross	ent? Yes <u>X</u> No
Remarks:	crics)						Tryunc oon riese	103 <u>X</u> 100
rtemants.								

Project/Site:	Bluewater SPN	1	City	y/County:	Aransas		Sampling Date: _	2/7/2019
Applicant/Owner:	P66		66	State		TX	Sampling Point: _	UDP-WET-03
Investigator(s):): J. Wiedeman / C. Gerken Sect		ction, Township,	on, Township, Range: NA				
Landform (hillslope, terra	ce, etc.):	hillslope	Loc	cal relief (concav	e, convex, none	e): <u>co</u> ı	nvexSlope	(%): <u>1-2%</u>
Subregion (LRR or MLRA	ւ)։ <u>Atlantic and Gu</u>	f Coast Lo	wland (LRR T)	Lat: <u>27.852</u>	813064 Lo	ong: <u>-97.0</u> 4	46547233 Datun	n: <u>NAD 83</u>
Soil Map Unit Name: Bea	ches, Psamments_				N'	WI classifica	tion:	
Are climatic / hydrologic o	conditions on the site	typical for	this time of year	? Yes <u>X</u> N	No (If no	, explain in F	Remarks.)	
Are Vegetation, S	Soil, or Hydr	ology	significantly d	listurbed? A	Are "Normal Circ	cumstances"	present? Yes _	X No
Are Vegetation, S			-				ers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.								
Hydrophytic Vegetation	on Present?	Yes X	No					
Hydric Soil Present?			No		mpled Area Wetland?	Vec	No. Y	
Wetland Hydrology P	resent?	Yes	No <u>X</u>	within a	vvetianu :	Yes No <u>X</u>		
HYDROLOGY								
Wetland Hydrology Primary Indicators (mir Surface Water High Water Ta Saturation (A3 Water Marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits (Inundation Vis Water-Stained Field Observations: Surface Water Prese Water Table Present' Saturation Present? (includes capillary frir Describe Recorded D	nimum of one is require (A1) ble (A2) ble (A2) B1) osits (B2) (B3) rust (B4) (B5) ible on Aerial Imagery Leaves (B9) nt? Yes Yes nge)	No <u>X</u> No <u>X</u> No <u>X</u> No <u>X</u>	Aquatic Fauna Marl Deposits Hydrogen Sulf Oxidized Rhizo Presence of R Recent Iron R Thin Muck Sui Other (Explain Depth (inches) Depth (inches)	is (B15) (LRR U) fide Odor (C1) pospheres along Livit Reduced Iron (C4) Reduction in Tilled inface (C7) in in Remarks)	ng Roots (C3) Soils (C6) Wetland Hydi	Surfa Spar Spar Drair Moss Cray Satur Geor Shall FAC Spha	ators (minimum of twace Soil Cracks (B6) sely Vegetated Concarge Patterns (B10) s Trim Lines (B16) Season Water Table fish Burrows (C8) ration Visible on Aermorphic Position (D2 ow Aquitard (D3) -Neutral Test (D5) signum moss (D8) (L	cave Surface (B8) (C2) ial Imagery (C9) PRR T, U)
Describe Necorded E	ata (stream gauge,	normoring	well, aeriai prioto	os, previous irisp	ections), ii avaii	iabie.		
Remarks:								

	Absolute Dominant Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30-ft Radius</u>)	% Cover Species? Status	Number of Dominant Species
1. None Observed	- 	That Are OBL, FACW, or FAC:3 (A)
2		Total Number of Deminent?
3		Total Number of Dominant2 Species Across All Strata:3 (B)
4.		(b)
		Percent of Dominant Species
•		That Are OBL, FACW, or FAC:100% (A/B)
6		
	0 = Total Cover	Prevalence Index worksheet:
	20% of total cover:0	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 15-ft Radius)		OBL species x 1 =
1. None Observed		FACW species x 2 =
2		FAC species x 3 =
3		FACU species x 4 =
4.		UPL species x 5 =
		Column Totals: (A) (B)
•		(-)
6		Prevalence Index = B/A =
	0 = Total Cover	Hydrophytic Vegetation Indicators:
50% of total cover:0	20% of total cover:0	
Shrub Stratum (Plot size: 15-ft Radius)		1 - Rapid Test for Hydrophytic Vegetation
1. None Observed		X 2 - Dominance Test is >50%
2		3 - Prevalence Test is ≤3.0 ¹
3.		Problematic Hydrophytic Vegetation ¹ (Explain)
4.		
		¹ Indicators of hydric soil and wetland hydrology must
5		be present, unless disturbed or problematic.
6		Definitions of Five Vegetation Strata:
	0 = Total Cover	
50% of total cover:0	20% of total cover:0	Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 5-ft Radius)		approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
1. Andropogon virginicus	30 Y FAC	(7.0 cm) of larger in diameter at breast neight (DDH).
2. Andropogon glomeratus		Sapling – Woody plants, excluding woody vines,
3. Shenoplectus robustus	O NI ODI	approximately 20 ft (6 m) or more in height and less
4. Spartina patens		than 3 in. (7.6 cm) DBH.
5		Shrub – Woody plants, excluding woody vines,
		approximately 3 to 20 ft (1 to 6 m) in height.
6.		
7	- ——— ———— ————	Herb – All herbaceous (non-woody) plants, including
8		herbaceous vines, regardless of size, <u>and</u> woody plants, except woody vines, less than approximately
9		3 ft (1 m) in height.
10		- · · (· · · ·) · · · · · · · · · · · ·
11.		Woody vine – All woody vines, regardless of height.
	98 = Total Cover	
50% of total cover: 40	20% of total cover: 19	
	20 % Of total cover	
Woody Vine Stratum (Plot size: 30-ft Radius)		
1. None Observed	- ——— ———— ————	
2		
3		
4		
5.		
	0 = Total Cover	Hydrophytic
E00/ -f-t-t-1		Vegetation
50% of total cover: 0	20% of total cover:0	Present? YesX No
Remarks: Facultative salt prairie grasses		
- 		

Sampling Point: <u>UDP-WET-03</u>

SOIL Sampling Point: <u>UDP-WET-03</u>

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	<u></u> %	Redo	x Features %	Type ¹	Loc ²	Texture	Remarks
0-16	10YR 4/2	90	10YR 5/6			M		Nemarks
<u> </u>	<u>101K 4/2</u>	90	10113/0			IVI	sandy ciay loam	
								_
								_
-					-			
17		letien DM Dee			010		21 # DI I	Daniel Linding M. Madelle
1Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 2Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ :								
1 -	indicators: (Applications)	able to all LKK	Polyvalue Below Surface (S8) (LRR S, T,			(IRRS T		-
l ——	c Epipedon (A2)	•	Thin Dark S					k (A10) (LRR S)
Blac	k Histic (A3)		Loamy Mud					Vertic (F18) (outside MLRA 150A,B)
Hydr	ogen Sulfide (A4)		Loamy Gle	yed Matrix	(F2)		Piedmont	Floodplain Soils (F19) (LRR P, S, T)
l	ified Layers (A5)		Depleted M	, ,				us Bright Loamy Soils (F20)
_	nic Bodies (A6) (LRR		Redox Darl	•	,		·	RA 153B)
l	i Mucky Mineral (A7) (L k Presence (A8) (LRR		Depleted D Redox Dep		` '			nt Material (TF2) llow Dark Surface (TF12)
	Muck (A9) (LRR P, T)	,	Marl (F10)	•	0)			plain in Remarks)
	eted Below Dark Surfa	·-	Depleted C	,	(MLRA 1	151)	`	,
Thicl	k Dark Surface (A12)		Iron-Manga	anese Mass	ses (F12)	(LRR O, P	P, T) ³ Indicators	of hydrophytic vegetation and
l	stal Prairie Redox (A16							ydrology must be present,
l	dy Mucky Mineral (S1)	(RLRR O, S)	Delta Ochri	` , `	•	,		stributed or problematic.
	dy Gleyed Matrix (S4) dy Redox (S5)	•	Reduced V Piedmont F		•		•	
	ped Matrix (S6)	•			,	, ,	-32A) RA 149A, 153C, 153D	0)
	Surface (S7) (LRR P ,	S, T, U)		Ü	,	`	, ,	•
Restrictive	Layer (if observed):							
Type:	,							
Depth (in	iches):						Hydric Soil Preser	nt? Yes <u>X</u> No
Remarks:						•		

Project/Site:	Bluewater SF	PM	City/County: _	Aransas		Sampling Date:	2/7/2019
Applicant/Owner:		P66		State	: <u>TX</u>	Sampling Point:	DP-WET-04
Investigator(s):	J. Wiedeman / C	. Gerken	Section, Towns	ship, Range:		NA	
Landform (hillslope, te	errace, etc.):d	epression, dunes	Local relief (co	ncave, convex, non	e): concave	Slope	(%): 1-2%
Subregion (LRR or ML							
Soil Map Unit Name: I	, -	•				ation:	
Are climatic / hydrolog			e of vear? Yes X				
Are Vegetation		• •			-	,	X No
Are Vegetation	•		•	(If needed, expl		•	<u> </u>
SUMMARY OF FI				•		,	roe otc
		-		int locations, th	ansects, n	inportant leatu	
Hydrophytic Veget		Yes X No	ls th	e Sampled Area			
Hydric Soil Preser Wetland Hydrolog		Yes <u>X</u> No Yes <u>X</u> No		in a Wetland?	Yes	X No	
Remarks:	y 1 100011K.	100 <u>X</u> 110					
HYDROLOGY							
Wetland Hydrolo	gy Indicators:			Se	condary Indic	cators (minimum of t	wo required)
-	minimum of one is requ	uired; check all that ap	ply)		•	ace Soil Cracks (B6)	
Surface Wa	ater (A1)	X Aqua	atic Fauna (B13)		Spa	rsely Vegetated Con	cave Surface (B8)
X High Water			Deposits (B15) (LRR	•		nage Patterns (B10)	ı
X Saturation Water Mark			ogen Sulfide Odor (C	·		s Trim Lines (B16)	· (C2)
	Deposits (B2)	·	zed Rhizospheres along ence of Reduced Iron	,		Season Water Table (fish Burrows (C8)	; (C2)
Drift Depos			ent Iron Reduction in T	` '		ration Visible on Ae	rial Imagery (C9)
X Algal Mat o	or Crust (B4)		Muck Surface (C7)		X Geo	morphic Position (D	2)
Iron Depos	, ,	·	r (Explain in Remarks)		llow Aquitard (D3)	
	Visible on Aerial Image	ry (B7)			·	C-Neutral Test (D5)	DD T II)
	ned Leaves (B9)				Spri	agnum moss (D8) (L	.RR 1, U)
Field Observation Surface Water Pre		No X Depth	(inches):				
Water Table Prese		No Depth					
Saturation Presen (includes capillary	t? Yes X	No Depth			Irology Pres	sent? Yes X	No
Describe Recorde	d Data (stream gauge	, monitoring well, ae	rial photos, previous	inspections), if ava	ilable:		
Remarks:							

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

EGETATION (Five Strata) – Use scientific name	s of plant	S.		Sampling Point: <u>DP-WET-04</u>		
	Absolute	Dominant	Indicator	Dominance Test worksheet:		
<u>Tree Stratum</u> (Plot size: <u>30-ft Radius</u>)	% Cover	Species?	Status	Number of Dominant Species		
1. None Observed				That Are OBL, FACW, or FAC: (A)		
2				Total Number of Demain and		
3				Total Number of Dominant2 Species Across All Strata: 2 (B)		
4.						
5.				Percent of Dominant Species		
				That Are OBL, FACW, or FAC:100% (A/B)		
6		= Total Co				
FOO/ of total covery O				Prevalence Index worksheet:		
50% of total cover: <u>0</u>	20% 01	total cover:		Total % Cover of: Multiply by:		
Sapling Stratum (Plot size: 15-ft Radius)				OBL species x 1 =		
1. None Observed				FACW species x 2 =		
2				FAC species x 3 =		
3				FACU species x 4 =		
4				UPL species x 5 =		
5				Column Totals: (A) (B)		
6						
	0	= Total Co	ver	Prevalence Index = B/A =		
50% of total cover: 0				Hydrophytic Vegetation Indicators:		
Shrub Stratum (Plot size: 15-ft Radius)				X 1 - Rapid Test for Hydrophytic Vegetation		
				X 2 - Dominance Test is >50%		
				3 - Prevalence Test is ≤3.0¹		
				Problematic Hydrophytic Vegetation¹ (Explain)		
3						
4				¹ Indicators of hydric soil and wetland hydrology must		
5				be present, unless disturbed or problematic.		
6				Definitions of Five Vegetation Strata:		
	0	= Total Co	ver	Johnson of the regulation of the		
50% of total cover:0	20% of	total cover:	0	Tree – Woody plants, excluding woody vines,		
Herb Stratum (Plot size: 5-ft Radius)				approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).		
1. Avicennia germinans	10	N	OBL	(7.0 cm) of larger in diameter at breast height (DBH).		
2. Borrichia frutescens		<u>N</u>	OBL	Sapling – Woody plants, excluding woody vines,		
3. Batis maritima		Υ		approximately 20 ft (6 m) or more in height and less		
4. Monanthochloe littoralis		Y		than 3 in. (7.6 cm) DBH.		
_				Shrub – Woody plants, excluding woody vines,		
•				approximately 3 to 20 ft (1 to 6 m) in height.		
•						
7				Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, <u>and</u> woody		
8				plants, except woody vines, less than approximately		
9				3 ft (1 m) in height.		
10				Manda de Allera de disconsidera de la constanta della constanta de la constanta de la constanta de la constant		
11				Woody vine – All woody vines, regardless of height.		
	95	= Total Co	ver			
50% of total cover: 47	20% of	total cover:	19			
Woody Vine Stratum (Plot size: 30-ft Radius)						
1. None Observed						
2.						
3.						
4.						
5		T-4-1 O-		Hydrophytic		
	0			Vegetation		
50% of total cover:0	20% of	total cover:	0	Present? YesX No		
Remarks:						

SOIL Sampling Point: <u>DP-WET-04</u>

Profile Desc	cription: (Describe	to the depth	needed to docur	nent the ir	ndicator	or confir	m the absence of	f indicators.)
Depth (inches)	Matrix Color (moist)	%	Redo Color (moist)	ox Features	s Type ¹	Loc ²	Texture	Remarks
0-6	5Y 5/1C	90	Gley 1 5/5y 1	10	C	M/PL	sand	
6-16	Gley 1 5/5y 1	90	10YR 5/6	10	С	M/PL	sand	_
							-	
		. -		 .				
	oncentration, D=Dep					ains.		L=Pore Lining, M=Matrix.
_	Indicators: (Application	able to all LF	•		•			or Problematic Hydric Soils ³ :
	sol (A1)		Polyvalue		` '			Muck (A9) (LRR O)
	c Epipedon (A2) k Histic (A3)		Thin Dark	cky Mineral				Muck (A10) (LRR S) ed Vertic (F18) (outside MLRA 150A,B)
	ogen Sulfide (A4)			yed Matrix		.i. O)		ont Floodplain Soils (F19) (LRR P, S, T)
	ified Layers (A5)		Depleted N	-	,			alous Bright Loamy Soils (F20)
	nic Bodies (A6) (LRR		Redox Dar	k Surface (F6)		(M	ILRA 153B)
	Mucky Mineral (A7) (L			Oark Surface	` '			arent Material (TF2)
	Presence (A8) (LRR			oressions (F	- 8)			hallow Dark Surface (TF12)
	Muck (A9) (LRR P, T) eted Below Dark Surfa		Marl (F10)	(LKK U) Ochric (F11)	(MI PA	151)	Other ((Explain in Remarks)
	c Dark Surface (A12)	oc (ATT)		anese Mass	, ,	,	P. T) 3Indicate	ors of hydrophytic vegetation and
	stal Prairie Redox (A16) (MLRA 150 <i>A</i>		rface (F13)	. ,		. ,	d hydrology must be present,
Sand	ly Mucky Mineral (S1)	(RLRR O, S)	Delta Ochr	ric (F17) (M	LRA, 151)	unless	distributed or problematic.
·	ly Gleyed Matrix (S4)		· ·	/ertic (F18)			•	
	ly Redox (S5)			Floodplain S	•	, ,	•	
	ped Matrix (S6) Surface (S7) (LRR P,	C T II)	Anomalous	s Bright Loa	amy Soils	(F20) (MLI	RA 149A, 153C, 15	53D)
_	Layer (if observed):							
Type:	-l \-						Handaia Oail Bara	
Remarks:	ches):						Hyaric Soil Pres	sent? Yes <u>X</u> No
Remarks.								

Project/Site:	Bluewater SI	PM .	City/Cou	ınty:	Aransas		Sampling Date: _	2/7/2019
Applicant/Owner:								
Investigator(s):	J. Wiedeman / 0	C. Gerken	Section,	Township,	Range:		NA	
Landform (hillslop	e, terrace, etc.):	hillslope	Local re	lief (concav	e, convex, none	e): <u>cc</u>	onvex Slope	(%): <u>1-2%</u>
Subregion (LRR o	or MLRA): <u>Atlantic and C</u>	Gulf Coast Lowl	and (LRR T) Lat	27.853	953 Long:	-97.0467	83 Datum:	NAD 83
	ne: Beaches, Psamments				_		ation:	
Are climatic / hydr	ologic conditions on the s	site typical for th	— nis time of year? Ye	s X N	lo (If no,	, explain in	Remarks.)	
	, Soil, or Hy						' present? Yes _	X No
_	, Soil, or Hy		-				ers in Remarks.)	
	FINDINGS – Attach				•	•	,	res, etc.
Hydrophytic V	/egetation Present?	Yes X	No					
Hydric Soil Pr	-		No X		mpled Area			
	ology Present?		No X	within a	Wetland?	Yes	No <u>X</u>	
Remarks:								
HYDROLOGY								
Wetland Hyd	rology Indicators:				Sec	condary Indic	ators (minimum of ty	wo required)
Primary Indicat	tors (minimum of one is req	uired; check all t	hat apply)			Surf	ace Soil Cracks (B6))
Surfac		<u></u>	Aquatic Fauna (B13	-			rsely Vegetated Con	
0.1	Vater Table (A2)		Marl Deposits (B15				nage Patterns (B10)	
·	tion (A3)				na Booto (C2)	·	s Trim Lines (B16)	· (C2)
Water	ent Deposits (B2)		Oxidized Rhizospher Presence of Reduc	_			Season Water Table /fish Burrows (C8)	; (G2)
·	eposits (B3)		Recent Iron Reduct	` ,			ration Visible on Ae	rial Imagery (C9)
· ·	Mat or Crust (B4)		Thin Muck Surface		` ,	·	morphic Position (D2	
	eposits (B5)		Other (Explain in R	emarks)			llow Aquitard (D3)	
Inunda	ation Visible on Aerial Image	ery (B7)					-Neutral Test (D5)	
Water-	-Stained Leaves (B9)					Sph	agnum moss (D8) (L	.RR T, U)
Field Observ	ations:							
Surface Wate	r Present? Yes	_ No <u>X</u> [Depth (inches):					
Water Table F			Depth (inches):		Watland Hude	rology Drog	ant? Voc	No. V
Saturation Pre (includes capi		_ No <u>X</u> [Depth (inches):		welland nyur	lology Fres	ent? Yes	NOX
	orded Data (stream gaugo	e, monitoring we	ell, aerial photos, pr	evious insp	ections), if avail	able:		
Remarks:								
	th sand mounds							

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

EGETATION (Five Strata) – Use scientific nam	es of plant	S.		Sampling Point: <u>UDP-WET-04</u>		
	Absolute	Dominant	Indicator	Dominance Test worksheet:		
<u>Tree Stratum</u> (Plot size: <u>30-ft Radius</u>)	% Cover	Species?	Status	Number of Dominant Species		
None Observed				That Are OBL, FACW, or FAC: (A)		
2				Total Number of Deminent?		
3				Total Number of Dominant2 Species Across All Strata: 2 (B)		
4				<u></u> (2)		
5.				Percent of Dominant Species		
6.				That Are OBL, FACW, or FAC: 100% (A/B)		
·		= Total Co	ver	December of the december of th		
50% of total cover:				Prevalence Index worksheet:		
Sapling Stratum (Plot size: 15-ft Radius)	20 / 00	iolai covei.		Total % Cover of: Multiply by:		
				OBL species x 1 =		
1. None Observed				FACW species x 2 =		
2				FAC species x 3 =		
3				FACU species x 4 =		
4				UPL species x 5 =		
5				Column Totals: (A) (B)		
6						
	0	= Total Co	ver	Prevalence Index = B/A =		
50% of total cover:	20% of	total cover:	0	Hydrophytic Vegetation Indicators:		
Shrub Stratum (Plot size: 15-ft Radius)				1 - Rapid Test for Hydrophytic Vegetation		
1. None Observed				X 2 - Dominance Test is >50%		
2.				3 - Prevalence Test is ≤3.0¹		
2				Problematic Hydrophytic Vegetation¹ (Explain)		
-				¹ Indicators of hydric soil and wetland hydrology must		
5				be present, unless disturbed or problematic.		
6				Definitions of Five Vegetation Strata:		
		= Total Co				
50% of total cover:) 20% of	total cover:	0	Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.		
Herb Stratum (Plot size: <u>5-ft Radius</u>)				(7.6 cm) or larger in diameter at breast height (DBH).		
Andropogon virginicus	30	<u>Y</u>	FAC	(7.0 only of larger in diameter at prodot height (BB11).		
2. Andropogon glomeratus	60	Y	FACW	Sapling – Woody plants, excluding woody vines,		
3. Shenoplectus robustus	10	N	OBL	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.		
4				than 3 iii. (7.0 cm) DBH.		
5.				Shrub – Woody plants, excluding woody vines,		
6.				approximately 3 to 20 ft (1 to 6 m) in height.		
7.				Herb – All herbaceous (non-woody) plants, including		
8.				herbaceous vines, regardless of size, and woody		
0.				plants, except woody vines, less than approximately		
9				3 ft (1 m) in height.		
10				Woody vine – All woody vines, regardless of height.		
11				Troody vine 7 in woody vines, regardless of height.		
		= Total Co				
50% of total cover:5	0 20% of	total cover:	20			
Woody Vine Stratum (Plot size: 30-ft Radius)						
None Observed						
2.						
3						
4						
5.			<u></u>			
		= Total Co	ver	Hydrophytic		
50% of total cover:				Vegetation Present? Yes X No		
	, 20 /0 UI	.J.u. 60761.		1 103 A INU		
Remarks: Facultative salt prairie grasses						

SOIL Sampling Point: <u>UDP-WET-04</u>

Depth	Matrix	0/		ox Features		1.0.2	Taxtura	Damanica
(inches)	Color (moist)		Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
0-16	10YR 5/3	99	10YR 5/6	1	C	M	sand	-
	-							
¹ Type: C=C	oncentration, D=Dep	letion, RM=Red	uced Matrix, MS	S=Masked	Sand Gr	ains.	² Location: P	L=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Application	able to all LRR	s, unless other	rwise note	d.)		Indicators f	for Problematic Hydric Soils ³ :
	sol (A1)	=	Polyvalue		. ,			Muck (A9) (LRR O)
	Epipedon (A2)	-	Thin Dark					Muck (A10) (LRR S)
	(Histic (A3)	-		cky Mineral		R O)		red Vertic (F18) (outside MLRA 150A,B)
	ogen Sulfide (A4) ified Layers (A5)	=	Loamy Gle Depleted N	eyed Matrix ((F2)			ont Floodplain Soils (F19) (LRR P, S, T) alous Bright Loamy Soils (F20)
	nic Bodies (A6) (LRR	P T II)		rk Surface (F	F6)			ILRA 153B)
	Mucky Mineral (A7) (L			Dark Surface	,			arent Material (TF2)
	Presence (A8) (LRR		·	oressions (F	` '		· · · · · · · · · · · · · · · · · · ·	Shallow Dark Surface (TF12)
1 cm	Muck (A9) (LRR P, T)) <u> </u>	Marl (F10)	(LRR U)			Other	(Explain in Remarks)
	eted Below Dark Surfa	ce (A11)		Ochric (F11)	•	•		
	CDark Surface (A12)) (MI DA 450A)			, ,	(LRR O, P,	,	ors of hydrophytic vegetation and
	stal Prairie Redox (A16 ly Mucky Mineral (S1)		Umbric Su Delta Ochr	rface (F13)				d hydrology must be present, distributed or problematic.
	ly Gleyed Matrix (S4)	(KLKK 0, 3) _				<i>)</i> 50A, 150B)	uness	distributed of problematic.
· · · · · · · · · · · · · · · · · · ·	ly Redox (S5)	_			•) (MLRA 14	9 A)	
Strip	ped Matrix (S6)		Anomalous	s Bright Loa	my Soils	(F20) (MLR	A 149A, 153C, 1	53D)
Dark	Surface (S7) (LRR P,	S, T, U)						
Restrictive	Layer (if observed):							
Type:								
Depth (in	ches):					H	Hydric Soil Pres	sent? Yes No <u>X</u>
Remarks:						•		

Project/Site:	Bluewater SPI	Л	City/County:	: Aransas		Sampling Date: _	2/7/2019
Applicant/Owner:		P66		State	e: <u>TX</u>	Sampling Point: _	DP-05
Investigator(s):	J. Wiedeman / C.	Gerken	Section, To	wnship, Range:		NA	
Landform (hillslope, terr	ace, etc.): <u>de</u>	pression, dunes	Local relief	(concave, convex, nor	ne): concave	Slope ((%): <u>1-2%</u>
Subregion (LRR or MLF	A): <u>Atlantic and Gu</u>	If Coast Lowland (LF	<u>RR T)</u> Lat:	27.852672 Long	: <u>-97.0499</u>	52 Datum:	NAD 83
Soil Map Unit Name: Be	eaches, Psamments_			1	NWI classifica	ation:	
Are climatic / hydrologic	conditions on the site	e typical for this time	of year? Yes _	X No (If no	o, explain in f	Remarks.)	
Are Vegetation,	Soil, or Hyd	rology signifi	cantly disturbed?	? Are "Normal Cir	rcumstances"	' present? Yes>	X No
Are Vegetation,	Soil, or Hyd	rology natura	ally problematic?	(If needed, expl	lain any answ	vers in Remarks.)	
SUMMARY OF FIN	DINGS – Attach	site map showin	ոց sampling բ	point locations, tr	ansects, i	mportant featur	es, etc.
Hydrophytic Vegeta		Yes X No					
Hydric Soil Present		Yes <u>X</u> No_	Is	the Sampled Area	V	N AL-	
Wetland Hydrology		Yes X No	w	vithin a Wetland?	Yes	X No	
Remarks:							
HYDROLOGY							
Wetland Hydrology	/ Indicators:			<u>Se</u>	econdary Indic	cators (minimum of tw	o required)
	inimum of one is requi				·	ace Soil Cracks (B6)	
Surface Water 7	` '		tic Fauna (B13)			rsely Vegetated Cond	cave Surface (B8)
X High Water T X Saturation (A			Deposits (B15) (LF ogen Sulfide Odor	•		nage Patterns (B10) s Trim Lines (B16)	
Water Marks	•		=	(C1) long Living Roots (C3)		Season Water Table	(C2)
Sediment De		· · · · · · · · · · · · · · · · · · ·	ence of Reduced Ir	• • , ,	-	fish Burrows (C8)	(02)
Drift Deposits		· · · · · · · · · · · · · · · · · · ·		in Tilled Soils (C6)		ration Visible on Aeri	al Imagery (C9)
Algal Mat or	Crust (B4)	Thin N	Muck Surface (C7))	X Geo	morphic Position (D2)
Iron Deposits	• •		(Explain in Rema	rks)		llow Aquitard (D3)	
	isible on Aerial Imagery	/ (B7)				C-Neutral Test (D5)	
Water-Staine	ed Leaves (B9)	_			Sph	agnum moss (D8) (LF	RR T, U)
Field Observations							
Surface Water Pres		No X Depth (
Water Table Present? Saturation Present?		No Depth (Wetland Hyd	drology Pres	sent? Yes X	No
(includes capillary fr		No Dop (,IIIG103 <i>)</i>				
Describe Recorded	Data (stream gauge,	monitoring well, aeri	ial photos, previc	ous inspections), if ava	ailable:		
D							
Remarks:							

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: <u>DP-05</u> Absolute Dominant Indicator Dominance Test worksheet: Tree Stratum (Plot size: 30-ft Radius) % Cover Species? Status Number of Dominant Species 1. None Observed That Are OBL, FACW, or FAC: Total Number of Dominant2 3. Species Across All Strata: 4. Percent of Dominant Species 5. That Are OBL, FACW, or FAC: ____100%___ (A/B) 0 = Total Cover Prevalence Index worksheet: 50% of total cover: 0 20% of total cover: 0 Total % Cover of: Multiply by: Sapling Stratum (Plot size: 15-ft Radius) OBL species _____ x 1 = ____ FACW species _____ x 2 = ____ 1. None Observed FAC species _____ x 3 = ____ FACU species _____ x 4 = _____ UPL species _____ x 5 = ____ 4. Column Totals: _____ (A) ____ (B) Prevalence Index = B/A =___ 0 = Total Cover **Hydrophytic Vegetation Indicators:** 50% of total cover: ___0 __ 20% of total cover: ___0 X 1 - Rapid Test for Hydrophytic Vegetation Shrub Stratum (Plot size: 15-ft Radius) X 2 - Dominance Test is >50% 1. None Observed 3 - Prevalence Test is ≤3.0¹ Problematic Hydrophytic Vegetation¹ (Explain) 4. ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. **Definitions of Five Vegetation Strata:** 0 = Total Cover 50% of total cover: 0 20% of total cover: 0 Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. Herb Stratum (Plot size: 5-ft Radius) (7.6 cm) or larger in diameter at breast height (DBH). 1. Andropogon glomeratus 30 Y FACW Sapling – Woody plants, excluding woody vines, 2. <u>Schenoplectus pungens</u> 30 Y OBL approximately 20 ft (6 m) or more in height and less 3. Spartina patens 30 Y FACW than 3 in. (7.6 cm) DBH. 4. Shrub – Woody plants, excluding woody vines, 5. approximately 3 to 20 ft (1 to 6 m) in height. 6. 7. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 9. 3 ft (1 m) in height. 10. Woody vine - All woody vines, regardless of height. 90 = Total Cover 50% of total cover: 45 20% of total cover: 18 Woody Vine Stratum (Plot size: 30-ft Radius) 1. None Observed 2. 4. Hydrophytic 0 = Total Cover Vegetation 50% of total cover: 0 20% of total cover: 0 Present?

Remarks:

Yes X No __

SOIL Sampling Point: <u>DP-05</u>

Depth	cription: (Describe Matrix			ox Features	6		tile absence of	muicators.
(inches)	Color (moist)	<u>%</u> (Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-16	10YR 5/2	90	10YR 5/6	10	<u>C</u>	M/PL	sand	
							<u>s</u>	_
¹ Type: C=C	oncentration, D=Dep	letion, RM=Rec	luced Matrix, MS	S=Masked	Sand Gr	ains.	² Location: PL	_=Pore Lining, M=Matrix.
	Indicators: (Applic						Indicators fo	or Problematic Hydric Soils ³ :
•	sol (A1)		Polyvalue		•	(LRR S, T, U		luck (A9) (LRR O)
Histic	Epipedon (A2)		Thin Dark	Surface (S9) (LRR S	s, T, U)	2 cm M	luck (A10) (LRR S)
	Histic (A3)			cky Mineral		(R O)		ed Vertic (F18) (outside MLRA 150A,B)
	ogen Sulfide (A4)			yed Matrix	(F2)			ont Floodplain Soils (F19) (LRR P, S, T)
	ified Layers (A5)		Depleted N		-0)			lous Bright Loamy Soils (F20)
	nic Bodies (A6) (LRR Mucky Mineral (A7) (L			k Surface (F Oark Surface	,		•	LRA 153B) arent Material (TF2)
	Presence (A8) (LRR			oressions (F	` '		·	nallow Dark Surface (TF12)
	Muck (A9) (LRR P, T)		Marl (F10)	,	٠,			Explain in Remarks)
	eted Below Dark Surfa		Depleted 0	Ochric (F11)	(MLRA	151)		
	Dark Surface (A12)				,	(LRR O, P,	•	ors of hydrophytic vegetation and
	stal Prairie Redox (A16			rface (F13)				d hydrology must be present,
	ly Mucky Mineral (S1)	(RLRR O, S)	Delta Ochr			•		distributed or problematic.
	ly Gleyed Matrix (S4) ly Redox (S5)	•			•	50A, 150B) 9) (MLRA 14		
	ped Matrix (S6)	•		•	•	, ,	эд) A 149A, 153C, 15	(3D)
	Surface (S7) (LRR P ,	S, T, U)	/ triomalout	o Drigin Loa	my cono	(1 20) (III 21 d	7, 1407, 1000, 10	,
	Layer (if observed):							
Type:	Layer (II observed).							
	ches):						Hvdric Soil Pres	sent? Yes X No
Remarks:	<u> </u>					-	,	<u> </u>

Project/Site:	Blue	ewater SPM			City/Cou	nty:	Aransas		Sampling Date: _	2/7/2019
Applicant/Owner:	P66				State	e: <u>TX</u>	Sampling Point: _	DP-06		
Investigator(s):	J. Wiedeman / C. Gerken			Section,	Township,	Range:		NA		
Landform (hillslope, terr	Landform (hillslope, terrace, etc.): hillslope Local r					ief (concave	e, convex, noi	ne):	convex Slope	(%): <u>1-2%</u>
Subregion (LRR or MLF	RA): <u>Atlan</u>	ntic and Gulf Co	ast Lov	vland (LRR	<u>:T)</u> Lat:	27.8526	88 Long	g: <u>-97.04</u>	9278 Datum:	NAD 83
Soil Map Unit Name: Be									fication:	
Are climatic / hydrologic	conditions	on the site typi	cal for	— this time of	vear? Yes	s X N	o (If n	io, explain i	n Remarks.)	
Are Vegetation,									es" present? Yes _	X No
Are Vegetation,				-					swers in Remarks.)	<u> </u>
SUMMARY OF FIN							_	•	,	es. etc.
					-	9 0			,	
Hydrophytic Vegeta Hydric Soil Present				No No			mpled Area			
Wetland Hydrology				No		within a \	Netland?	Yes	No <u>X</u>	
Remarks:										
HYDROLOGY										
Primary Indicators (m Surface Wat High Water					Fauna (B13 posits (B15) n Sulfide Od	5) (LRR U) Drainage Patterns (B10)			cave Surface (B8)	
Sediment De					e of Reduce	_	3 ()	<u> </u>	rayfish Burrows (C8)	()
Drift Deposit				_		on in Tilled	Soils (C6)		aturation Visible on Aer	
Algal Mat or Iron Deposit			-	_	ck Surface (xplain in Re	•			eomorphic Position (D2 hallow Aquitard (D3)	2)
		rial Imagery (B7)		_ Other (L	Apiaiii iii ite	illaiks)		<u> </u>	AC-Neutral Test (D5)	
Water-Staine	ed Leaves (E	39)						s	phagnum moss (D8) (L	RR T, U)
Field Observations	s:									
Surface Water Pres	ent? Y	es No _	X	Depth (inc	ches):					
Water Table Preser		es No _					Wetland Hy	drology Pr	resent? Yes	No Y
Saturation Present? (includes capillary for		es No _	<u> X</u>	Depth (inc	ches):		wetianu my	urology Fi	esent: 165	NO <u>X</u>
Describe Recorded		am gauge, moni	toring \	well, aerial	photos, pre	evious inspe	ections), if ava	ailable:		
	`	0 0 /	Ü				,,			
Remarks:										

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: <u>DP-06</u> Absolute Dominant Indicator Dominance Test worksheet: Tree Stratum (Plot size: 30-ft Radius) % Cover Species? Status Number of Dominant Species 1. None Observed That Are OBL, FACW, or FAC: Total Number of Dominant2 3. Species Across All Strata: 4. Percent of Dominant Species 5. That Are OBL, FACW, or FAC: ____100%___ (A/B) 0 = Total Cover Prevalence Index worksheet: 50% of total cover: ___0 20% of total cover: ___0 Total % Cover of: Multiply by: Sapling Stratum (Plot size: 15-ft Radius) OBL species _____ x 1 = ____ 1. None Observed FACW species _____ x 2 = ____ FAC species _____ x 3 = ____ FACU species _____ x 4 = ____ UPL species _____ x 5 = ____ 4. Column Totals: _____ (A) ____ (B) Prevalence Index = B/A =___ 0 = Total Cover **Hydrophytic Vegetation Indicators:** 50% of total cover: ___0 __ 20% of total cover: ___0 1 - Rapid Test for Hydrophytic Vegetation Shrub Stratum (Plot size: 15-ft Radius) X 2 - Dominance Test is >50% 1. None Observed 3 - Prevalence Test is ≤3.0¹ Problematic Hydrophytic Vegetation¹ (Explain) 4. ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. **Definitions of Five Vegetation Strata:** 0 = Total Cover 50% of total cover: 0 20% of total cover: 0 Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. Herb Stratum (Plot size: 5-ft Radius) (7.6 cm) or larger in diameter at breast height (DBH). 1. Andropogon virginicus 2. Andropogon glomeratus 40 Y FACW Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less 3. Shenoplectus robustus 2 N OBL than 3 in. (7.6 cm) DBH. Spartina patens 25 Y FACW Shrub – Woody plants, excluding woody vines, 5. approximately 3 to 20 ft (1 to 6 m) in height. 6. 7. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 9. 3 ft (1 m) in height. 10. Woody vine - All woody vines, regardless of height. 98 = Total Cover 50% of total cover: 49 20% of total cover: 19 Woody Vine Stratum (Plot size: 30-ft Radius) 1. None Observed 2. 4. Hydrophytic 0 = Total Cover Vegetation 50% of total cover: 0 20% of total cover: 0 Present? Yes X No ___

Remarks: Facultative salt prairie grasses

SOIL Sampling Point: <u>DP-06</u>

Profile Des	cription: (Describe	to the depth n	eeded to docum	nent the i	ndicator o	or confirm	the absence	of indicators.)
Depth	Matrix			x Feature			- .	B
(inches)	Color (moist)		Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
0-16	10YR 4/2	90	10YR 5/6	10	<u> </u>	M	sand	_
¹ Type: C=C	oncentration, D=Dep	letion, RM=Re	duced Matrix, MS	=Masked	Sand Gra	ains.	² Location: I	PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Application	able to all LRF	Rs, unless other	wise note	ed.)		Indicators	for Problematic Hydric Soils ³ :
Histo	sol (A1)		Polyvalue E	3elow Surfa	ace (S8) (LRR S, T, l		Muck (A9) (LRR O)
	Epipedon (A2)		Thin Dark S					Muck (A10) (LRR S)
	(Histic (A3)		Loamy Muc	-		R O)		iced Vertic (F18) (outside MLRA 150A,B)
	ogen Sulfide (A4) ified Layers (A5)		Loamy Gley Depleted M	_	(F2)			mont Floodplain Soils (F19) (LRR P, S, T) nalous Bright Loamy Soils (F20)
	nic Bodies (A6) (LRR	P. T. U)	Redox Dark	` '	F6)			MLRA 153B)
	Mucky Mineral (A7) (L	,	Depleted D	,	,		,	Parent Material (TF2)
	Presence (A8) (LRR	U)	Redox Dep	ressions (f	F8)		Very	Shallow Dark Surface (TF12)
	Muck (A9) (LRR P, T)		Marl (F10)	(LRR U)			Other	r (Explain in Remarks)
	eted Below Dark Surfa	ce (A11)	Depleted O				_, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
	c Dark Surface (A12) stal Prairie Redox (A16	:\ /MI DA 150A\	Iron-Manga Umbric Sur					ators of hydrophytic vegetation and and hydrology must be present,
	ly Mucky Mineral (S1)		Delta Ochri	, ,		. ,		es distributed or problematic.
	ly Gleyed Matrix (S4)	(1121111 0, 0)	Reduced V	, , ,			dilloc	is distributed of problematic.
	ly Redox (S5)		Piedmont F		•		9 A)	
Strip	ped Matrix (S6)		Anomalous	Bright Loa	amy Soils ((F20) (MLR	A 149A, 153C,	153D)
Dark	Surface (S7) (LRR P,	S, T, U)						
Restrictive	Layer (if observed):							
Type:								
Depth (in	ches):					ı	Hydric Soil Pro	esent? Yes X No
Remarks:								

Project/Site:	Bluewater	Bluewater SPM		City/County: Aransas		Sampling Date:	2/7/2019
Applicant/Owner:				State:		X Sampling Point:	DP-07
Investigator(s):	J. Wiedeman	/ C. Gerken	Section,	Township, Range:	:	NA	
						convex Slope	
Subregion (LRR or ML	-RA): Atlantic and	d Gulf Coast Lo	owland (LRR T) Lat	27.852629	Lona: -97	.051583 Datum:	NAD 83
Soil Map Unit Name: I					-	assification:	
Are climatic / hydrolog				s X No			
Are Vegetation						ances" present? Yes _	X No
Are Vegetation						y answers in Remarks.)	<u> </u>
						cts, important featu	ıres, etc.
						oto, important route	
Hydrophytic Vege Hydric Soil Preser		· · · · · · · · · · · · · · · · · · ·	No No	Is the Sampled			
Wetland Hydrolog			No	within a Wetlan	id? Y	es <u>X</u> No	-
Remarks:				,I			
HYDROLOGY							
Wetland Hydrolo	gy Indicators:				Secondar	ry Indicators (minimum of t	two required)
- I	minimum of one is r	equired; check a	all that apply)			_ Surface Soil Cracks (B6	
Surface Wa	` '	X	Aquatic Fauna (B13	3)			
X High Water			Marl Deposits (B15			_ Drainage Patterns (B10)
X Saturation			Hydrogen Sulfide C			_ Moss Trim Lines (B16)	n (C2)
Water Mark	Deposits (B2)	· ·	Oxidized Rhizospher Presence of Reduc			Dry-Season Water TablCrayfish Burrows (C8)	e (C2)
Drift Depos				tion in Tilled Soils (C	6) X	= :	erial Imagery (C9)
X Algal Mat o	, ,		Thin Muck Surface	•	X	Geomorphic Position (D	. , ,
Iron Depos	` '		Other (Explain in Re	emarks)		_ Shallow Aquitard (D3)	
	Visible on Aerial Ima	agery (B7)			·	FAC-Neutral Test (D5)	
Water-Stair	ned Leaves (B9)					_ Sphagnum moss (D8) (LRR T, U)
Field Observation		N- V	Double (in the ca)				
Surface Water Pre			Depth (inches): Depth (inches):				
Saturation Presen			Depth (inches):		nd Hydrolog	y Present? Yes X	No
(includes capillary			,				
Describe Recorde	d Data (stream ga	uge, monitoring	well, aerial photos, pr	evious inspections), if available:		
Remarks:							
i tomante.							
1							

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: <u>DP-07</u> Absolute Dominant Indicator Dominance Test worksheet: Tree Stratum (Plot size: 30-ft Radius) % Cover Species? Status Number of Dominant Species 1. None Observed That Are OBL, FACW, or FAC: Total Number of Dominant2 3. Species Across All Strata: 4. Percent of Dominant Species 5. That Are OBL, FACW, or FAC: ____100%___ (A/B) 6 0 = Total Cover Prevalence Index worksheet: 50% of total cover: ___0 20% of total cover: ___0 Total % Cover of: Multiply by: Sapling Stratum (Plot size: 15-ft Radius) OBL species _____ x 1 = ____ 1. None Observed FACW species _____ x 2 = ____ FAC species _____ x 3 = ____ FACU species _____ x 4 = _____ UPL species _____ x 5 = ____ 4. Column Totals: _____ (A) ____ (B) Prevalence Index = B/A =___ 0 = Total Cover **Hydrophytic Vegetation Indicators:** 50% of total cover: ___0 __ 20% of total cover: ___0 X 1 - Rapid Test for Hydrophytic Vegetation Shrub Stratum (Plot size: 15-ft Radius) X 2 - Dominance Test is >50% 1. None Observed 3 - Prevalence Test is ≤3.0¹ Problematic Hydrophytic Vegetation¹ (Explain) 4. ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. **Definitions of Five Vegetation Strata:** 0 = Total Cover 50% of total cover: 0 20% of total cover: 0 Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. Herb Stratum (Plot size: 5-ft Radius) (7.6 cm) or larger in diameter at breast height (DBH). ______15___N___OBL 1. <u>Distichlis spicata</u> Sapling – Woody plants, excluding woody vines, ______ <u>10 N OBL</u> 2. Borrichia frutescens approximately 20 ft (6 m) or more in height and less 3. Junucs roemerianus 20 Y OBL than 3 in. (7.6 cm) DBH. Monanthochloe littoralis 10 N OBL Shrub – Woody plants, excluding woody vines, Spartina patens 40 Y FACW 5. approximately 3 to 20 ft (1 to 6 m) in height. 6. 7. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 9. 3 ft (1 m) in height. 10. Woody vine - All woody vines, regardless of height. 95 = Total Cover 50% of total cover: <u>47</u> 20% of total cover: <u>19</u> Woody Vine Stratum (Plot size: 30-ft Radius) 1. None Observed 2. 3. 4. Hydrophytic 0 = Total Cover Vegetation 50% of total cover: 0 20% of total cover: 0 Present?

Remarks:

Yes X No ___

SOIL Sampling Point: <u>DP-07</u>

Profile Desc	cription: (Describe	to the depth n	eeded to docun	nent the ir	ndicator	or confirm	the absence of	findicators.)
Depth (inches)	Matrix Color (moist)	<u></u> %	Redo	x Features %	Type ¹	Loc ²	Texture	Remarks
0-16	5 Y 5/1	90	10YR 5/6			M/PL	sand	Remarks
<u> </u>	5 1 3/1	90	10113/0			IVI/PL	sanu	
-								_
-								_
					-			
17	oncentration, D=Dep		de la la Madrica NAC		01-0-		21 # DI	Daniel Indian M. Madelle
- / !	· · · · · ·	*				ains.		_=Pore Lining, M=Matrix.
1 -	Indicators: (Applications)	able to all LRF	•		•	(LRR S, T, U		or Problematic Hydric Soils ³ : fluck (A9) (LRR O)
	c Epipedon (A2)		Thin Dark S					fluck (A10) (LRR S)
	k Histic (A3)		Loamy Mud			•		ed Vertic (F18) (outside MLRA 150A,B)
Hydr	ogen Sulfide (A4)		Loamy Gle	yed Matrix	(F2)		Piedmo	ont Floodplain Soils (F19) (LRR P, S, T)
l -	ified Layers (A5)		Depleted M	, ,				lous Bright Loamy Soils (F20)
_	inic Bodies (A6) (LRR I		Redox Darl	•	,		•	LRA 153B)
	Mucky Mineral (A7) (L R Presence (A8) (LRR		Depleted D Redox Dep		` '			arent Material (TF2) hallow Dark Surface (TF12)
l	Muck (A9) (LRR P, T)	,	Marl (F10)	,	0)			Explain in Remarks)
	eted Below Dark Surfa		Depleted C	,	(MLRA	151)		•
	Dark Surface (A12)					(LRR O, P,	T) ³ Indicate	ors of hydrophytic vegetation and
l -	stal Prairie Redox (A16					•		d hydrology must be present,
l -	ly Mucky Mineral (S1)	(RLRR O, S)	Delta Ochri	` , `	•	,	unless	distributed or problematic.
l	ly Gleyed Matrix (S4) ly Redox (S5)					50A, 150B) 9) (MLRA 149	9Δ)	
	ped Matrix (S6)				•	, ,	A 149A, 153C, 15	53D)
	Surface (S7) (LRR P,	S, T, U)		Ü	,	, , ,	, ,	,
Restrictive	Layer (if observed):							
Type:	_uyo: (oboo: vou).							
	ches):					F	Hydric Soil Pres	sent? Yes X No
Remarks:								

Project/Site:	Bluewate	Bluewater SPM		City/County: Aransas			Sampling Date:	2/7/2019		
Applicant/Owner:				State:		: <u>TX</u>	Sampling Point:	DP-08		
Investigator(s):	J. Wiedeman / C. Gerken						NA			
Landform (hillslope, te										
Subregion (LRR or MI	_RA): Atlantic ar	nd Gulf Coast L	owland (LRR T)	Lat: 27.85	3202 Lona:	-97.052	2216 Datum:	NAD 83		
Soil Map Unit Name:					_		ication:			
Are climatic / hydrolog				r? Yes X						
Are Vegetation							es" present? Yes _>	X No		
Are Vegetation							swers in Remarks.)			
SUMMARY OF FI						•	,	es. etc.		
Hydrophytic Vege Hydric Soil Preser			X No X No	Is the S	ampled Area					
Wetland Hydrolog			X No		a Wetland?	etland? Yes X No				
Remarks:	<u> </u>			<u> </u>						
HYDROLOGY										
Wetland Hydrolo Primary Indicators		roquirod: chock	all that apply)		<u>Se</u>		dicators (minimum of tw urface Soil Cracks (B6)	o required)		
Surface W			X Aquatic Faun	a (B13)			parsely Vegetated Conc	ave Surface (B8)		
X High Water	` '	_	 •	s (B15) (LRR U)		-	rainage Patterns (B10)	(= 0)		
X Saturation			X Hydrogen Sul				oss Trim Lines (B16)			
Water Mar			X Oxidized Rhizo				ry-Season Water Table	(C2)		
Sediment I	Deposits (B2)		X Presence of F Recent Iron F	Reduced Iron (C4 Reduction in Tilled			rayfish Burrows (C8) aturation Visible on Aeri	al Imagery (C9)		
X Algal Mat o		<u> </u>	Thin Muck Su		a cono (co)		eomorphic Position (D2)	. ,		
Iron Depos	` '	_	Other (Explain	n in Remarks)		SI	nallow Aquitard (D3)			
· · · · · · · · · · · · · · · · · · ·	Visible on Aerial Im	agery (B7)					AC-Neutral Test (D5)			
	ned Leaves (B9)				1	S _I	ohagnum moss (D8) (LF	RR T, U)		
Field Observatio Surface Water Pre		No. X	Depth (inches)	١٠						
Water Table Pres			Depth (inches)							
Saturation Presen	it? Yes _		Depth (inches)		Wetland Hyd	rology Pr	esent? Yes X	No		
(includes capillary										
Describe Recorde	ed Data (stream ga	uge, monitorin	g well, aerial phot	os, previous ins	pections), if avai	ilable:				
Remarks:										

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: <u>DP-08</u> Absolute Dominant Indicator Dominance Test worksheet: Tree Stratum (Plot size: 30-ft Radius) % Cover Species? Status **Number of Dominant Species** 1. None Observed That Are OBL, FACW, or FAC: Total Number of Dominant2 3. Species Across All Strata: 4. Percent of Dominant Species 5. That Are OBL, FACW, or FAC: ____100%___ (A/B) 0 = Total Cover Prevalence Index worksheet: 50% of total cover: ___0 20% of total cover: ___0 Total % Cover of: Multiply by: Sapling Stratum (Plot size: 15-ft Radius) OBL species _____ x 1 = ____ 1. None Observed FACW species _____ x 2 = ____ FAC species _____ x 3 = ____ FACU species _____ x 4 = _____ UPL species _____ x 5 = ____ 4. Column Totals: _____ (A) ____ (B) Prevalence Index = B/A =___ 0 = Total Cover **Hydrophytic Vegetation Indicators:** 50% of total cover: ___0 __ 20% of total cover: ___0 X 1 - Rapid Test for Hydrophytic Vegetation Shrub Stratum (Plot size: 15-ft Radius) X 2 - Dominance Test is >50% 1. None Observed 3 - Prevalence Test is ≤3.0¹ Problematic Hydrophytic Vegetation¹ (Explain) 4. ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. **Definitions of Five Vegetation Strata:** 0 = Total Cover 50% of total cover: 0 20% of total cover: 0 Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. Herb Stratum (Plot size: 5-ft Radius) (7.6 cm) or larger in diameter at breast height (DBH). 1. <u>Distichlis spicata</u> Y OBL 2. Borrichia frutescens 10 N OBL Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less 3. Batis maritima 15 N OBL than 3 in. (7.6 cm) DBH. Monanthochloe littoralis 40 Y OBL Shrub – Woody plants, excluding woody vines, 5. approximately 3 to 20 ft (1 to 6 m) in height. 6. 7. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 9. 3 ft (1 m) in height. 10. Woody vine - All woody vines, regardless of height. ____100 = Total Cover 50% of total cover: ______ 20% of total cover: ______ 20 Woody Vine Stratum (Plot size: 30-ft Radius) 1. None Observed 2. 3. 4. Hydrophytic 0 = Total Cover Vegetation 50% of total cover: 0 20% of total cover: 0 Present?

Remarks:

Yes X No __

SOIL Sampling Point: <u>DP-08</u>

Profile Desc	cription: (Describe	to the depth i	needed to docum	nent the in	dicator	or confirm	n the absence of	f indicators.)
Depth (inches)	Matrix Color (moist)	<u></u> %	Redo	ox Features %	Type ¹	Loc ²	Texture	Remarks
0-6	5Y 5/1C	90	Gley 1 5/5y 1	10	C	M/PL	sand	
6-16	Gley 1 5/5y 1	90	10YR 5/6	10	С	M/PL	sand	
¹Type: C=Cd	oncentration, D=Dep	letion RM=Re	duced Matrix MS	S=Masked	Sand G	ains	² I ocation: PI	L=Pore Lining, M=Matrix.
	Indicators: (Applications)					unio.		or Problematic Hydric Soils ³ :
•	sol (A1)	ubio to un Eit	Polyvalue I		•	(LRR S, T,		Muck (A9) (LRR O)
	Epipedon (A2)		Thin Dark		, ,			Muck (A10) (LRR S)
	Histic (A3)			cky Mineral		RO)		ed Vertic (F18) (outside MLRA 150A,B)
	ogen Sulfide (A4)			yed Matrix ((F2)			ont Floodplain Soils (F19) (LRR P, S, T)
	fied Layers (A5) nic Bodies (A6) (LRR l	D T II)	Depleted N	/latrix (F3) k Surface (f	=6)			alous Bright Loamy Soils (F20) ILRA 153B)
	Mucky Mineral (A7) (L			ark Surface	,			arent Material (TF2)
	Presence (A8) (LRR			ressions (F	, ,		· · · · · · · · · · · · · · · · · · ·	hallow Dark Surface (TF12)
	Muck (A9) (LRR P, T)		Marl (F10)	(LRR U)			Other ((Explain in Remarks)
	eted Below Dark Surfa	ce (A11)		Ochric (F11)	•	•		
	: Dark Surface (A12) tal Prairie Redox (A16	:\ /MI DA 150A		anese Mass rface (F13)	٠,		• •	ors of hydrophytic vegetation and d hydrology must be present,
	y Mucky Mineral (S1)		Delta Ochr					distributed or problematic.
	y Gleyed Matrix (S4)	(-, -,	· <u></u>	ertic (F18)		-		·
Sand	y Redox (S5)		Piedmont F	Floodplain S	Soils (F19) (MLRA 1	49A)	
	ped Matrix (S6)		Anomalous	Bright Loa	my Soils	(F20) (MLF	RA 149A, 153C, 15	53D)
Dark	Surface (S7) (LRR P,	S, I, U)						
_	Layer (if observed):							
Type:	-t \.						Unidada Ondi Bara	
Remarks:	ches):						Hydric Soil Pres	sent? Yes <u>X</u> No
Nemarks.								

APPENDIX C

Photographic Log

Wetland Vegetation Communities - Emergent Wetlands



Figure 1. Palustrine emergent wetland WA011 as viewed from DPA026_PEM; view facing north.



Figure 3. Palustrine emergent wetland WA019 as viewed from DPA044_PEM; view facing east.



Figure 5. Palustrine emergent wetland WA018 as viewed from DPA049_PEM; view facing north.



Figure 2. Estuarine intertidal emergent wetland WA012 as viewed from DPA029_PEM; view facing east.



Figure 4. Estuarine intertidal emergent wetland WB007 as viewed from DPB018_PEM; view facing west.



Figure 6. Estuarine intertidal emergent wetland WB013 as viewed from DPB040_PEM; view facing north.

Wetland Vegetation Communities - Scrub-Shrub Wetlands



Figure 7. Palustrine scrub-shrub wetland WB003 as viewed from DPB007_PSS; view facing west.



Figure 9. Estuarine intertidal scrub-shrub wetland WB006 as viewed from DPB017_PSS; view facing south.



Figure 11. Estuarine intertidal scrub-shrub wetland WA006 as viewed from DPB017_PSS; view facing north.



Figure 8. Estuarine intertidal scrub-shrub wetland WB005 as viewed from DPB011_PSS; view facing east.



Figure 10. Estuarine intertidal scrub-shrub wetland WB013 as viewed from DPB039_PSS; view facing south.

Non-wetland Vegetation Communities - Herbaceous Uplands



Figure 12. An herbaceous upland as viewed from DPA027_U; view facing north.



Figure 14. An herbaceous upland as viewed from DPA038_U; view facing east.



Figure 16. An herbaceous upland as viewed from DPB060_U; view facing west.



Figure 13. An herbaceous upland as viewed from DPA028_U; view facing south.



Figure 15. An herbaceous upland as viewed from DPB061_U; view facing south.



Figure 17. An herbaceous upland as viewed from DPB012_U; view facing east.

Non-wetland Vegetation Communities - Scrub-Shrub Uplands



Figure 18. A scrub-shrub upland as viewed from DPA033_U; view facing east.



Figure 19. A scrub-shrub upland as viewed from DPB006_U; view facing west.

Waterbodies - Stream Waterbodies



Figure 20. Ephemeral ditch SA005; view facing west.



Figure 22. Perennial stream SA007; view facing north.



Figure 21. Intermittent stream SA006; view facing west.

Waterbodies - Ponded Waterbodies and Coastal Inlets



Figure 23. Coastal inlet waterbody PB001; view facing west.



Figure 25. Ponded waterbody PA001; view facing north.



Figure 24. Ponded waterbody PB003; view facing west.

APPENDIX D

NRCS Soil Map Unit Descriptions

Wetland Delineation Report for Inshore Components of the Proposed Bluewater SPM Project in Aransas, Nueces, And San Patricio Counties, Texas – Soil Map Unit Descriptions
Information provided from the NRCS National Cooperative Soil Survey.

ARANSAS COUNTY

Beaches (By). The Beaches is a miscellaneous area.

Psamments (Ps). The Psamments component makes up 80 percent of the map unit. Slopes are 0 to 3 percent. This component is on foredunes on barrier islands. The parent material consists of sandy eolian deposits. The natural drainage class is well drained. Water movement in the most restrictive layer is very high. Available water to a depth of 60 inches (or restricted depth) is low. This soil is rarely flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. This soil does not meet hydric criteria.

NUECES COUNTY

Ijam clay loam (Ma). The Ijam component makes up 85 percent of the map unit. Slopes are 0 to 1 percent. This component is on flats on dredge spoil banks on lagoons. The parent material consists of sandy dredge spoils and/or loamy dredge spoils. The natural drainage class is poorly drained. Available water to a depth of 60 inches is moderate. This soil is rarely flooded. It is not ponded. A seasonal zone of water saturation is at 18 inches during January, February, March, April, May, September, October, November, December. This soil meets hydric criteria.

Mustang fine sand (Mu). The Mustang component makes up 85 percent of the map unit. Slopes are 0 to 1 percent. This component is on shallow depressions on barrier flats on barrier islands. The parent material consists of sandy eolian and storm washover sediments of Holocene age. The natural drainage class is poorly drained. Available water to a depth of 60 inches is very low. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 3 inches during January, February, March, April, May, June, July, August, September, October, November, December. The soil meets hydric criteria.

Tidal flats (Ta). The Tidal flats is a miscellaneous area.

Water (W). The Water is a miscellaneous area.

SAN PATRICIO COUNTY

Dianola soils (Ds). The Dianola component makes up 85 percent of the map unit. Slopes are 0 to 1 percent. This component is on strand plains on low coastal plains. The parent material consists of loamy fluviomarine deposits of Quaternary age. The natural drainage class is poorly drained. Available water to a depth of 60 inches (or restricted depth) is very low. This soil is frequently flooded. It is not ponded. A seasonal zone of water saturation is at 30 inches during January, February, March, April, May, June, July, August, September, October, November, December. This soil meets hydric criteria.

Mustang fine sand, 0 to 1 percent slopes, occasionally flooded, frequently ponded (Mu). The Mustang component makes up 85 percent of the map unit. This component is on shallow depressions on barrier flats on barrier islands. The parent material consists of storm washover and sandy eolian deposits derived from igneous, metamorphic and sedimentary rock. The natural drainage class is poorly drained. Available water to a depth of 60 inches (or restricted depth) is low. This soil is occasionally flooded. It is frequently ponded. A seasonal zone of water saturation is at 3 inches during January, February, March, April, May, June, July, August, September, October, November, December. This soil meets hydric criteria.

Water (W). The Water is a miscellaneous area.