

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1006**

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Herb Stratum (Plot Size : 30)			
1. <u>Arundo donax</u>	90 <input checked="" type="checkbox"/>	90.0%	FAC
2. <u>Cynodon dactylon</u>	5 <input type="checkbox"/>	5.0%	FACU
3. <u>Parietaria pensylvanica</u>	4 <input type="checkbox"/>	4.0%	FACU
4. <u>Chaerophyllum tainturieri</u>	1 <input type="checkbox"/>	1.0%	FAC
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
9. _____	0 <input type="checkbox"/>	0.0%	_____
10. _____	0 <input type="checkbox"/>	0.0%	_____
11. _____	0 <input type="checkbox"/>	0.0%	_____
12. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 50 20% of Total Cover: 20	100	= Total Cover	
Woody Vine Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 60.0% (A/B)

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 91 x 3 = 273

FACU species 9 x 4 = 36

UPL species 0 x 5 = 0

Column Totals: 100 (A) 309 (B)

Prevalence Index = B/A = 3,090

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1006

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	3/2	100				Sandy Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/4/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1007
Investigator(s): B. Bringham & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Foothills **Local relief (concave, convex, none):** Convex **Slope:** 10 % 5.7 °
Subregion (LRR): LRR T **Lat:** 27.910016 **Long:** -97.376447 **Datum:** NAD 83
Soil Map Unit Name: Raymondville clay loam, 1 to 3 percent slopes (RaB) **NWI Classification:** PUBFh

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Hydric soil is not present. This is not a wetland.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (Minimum of one required; check all that apply)</u>		<u>Secondary Indicators (Minimum of 2 required)</u>	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input checked="" type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____		Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1007**

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Herb Stratum (Plot Size : 30)			
1. <u>Arundo donax</u>	50 <input checked="" type="checkbox"/>	55.6%	FAC
2. <u>Andropogon azeraridii</u>	20 <input checked="" type="checkbox"/>	22.2%	FAC
3. <u>Cynodon dactylon</u>	15 <input type="checkbox"/>	16.7%	FACU
4. <u>Galium aparine</u>	5 <input type="checkbox"/>	5.6%	FACU
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
9. _____	0 <input type="checkbox"/>	0.0%	_____
10. _____	0 <input type="checkbox"/>	0.0%	_____
11. _____	0 <input type="checkbox"/>	0.0%	_____
12. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 45 20% of Total Cover: 18	90	= Total Cover	
Woody Vine Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

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

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

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 70 x 3 = 210

FACU species 20 x 4 = 80

UPL species 0 x 5 = 0

Column Totals: 90 (A) 290 (B)

Prevalence Index = B/A = 3.222

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1007

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	4/1	100				Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/4/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1008
Investigator(s): B. Bringhurst & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Flat **Slope:** 0 % 0.0 °
Subregion (LRR): LRR T **Lat:** 27.909918 **Long:** -97.376306 **Datum:** NAD 83
Soil Map Unit Name: Raymondville clay loam, 1 to 3 percent slopes (RaB) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Hydrophytic vegetation and hydric soil are not present. This is not a wetland.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (Minimum of one required; check all that apply)</u>		<u>Secondary Indicators (Minimum of 2 required)</u>	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>0</u>		Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1008**

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Herb Stratum (Plot Size : 30)			
1. <u>Cynodon dactylon</u>	2 <input checked="" type="checkbox"/>	100.0%	FACU
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
9. _____	0 <input type="checkbox"/>	0.0%	_____
10. _____	0 <input type="checkbox"/>	0.0%	_____
11. _____	0 <input type="checkbox"/>	0.0%	_____
12. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 1 20% of Total Cover: 0.4	2	= Total Cover	
Woody Vine Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>2</u>	x 4 =	<u>8</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>2</u> (A)		<u>8</u> (B)

Prevalence Index = B/A = 4,000

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1008

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	3/1	100				Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/4/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1009
Investigator(s): B. Bringhurst & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Flat **Slope:** 0 % 0.0 °
Subregion (LRR): LRR T **Lat:** 27.909525 **Long:** -97.370263 **Datum:** NAD 83
Soil Map Unit Name: Victoria clay 0 to 1 percent slopes (VCA) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Hydrophytic vegetation and hydric soil are not present. This is not a wetland.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (Minimum of one required; check all that apply)</u>		<u>Secondary Indicators (Minimum of 2 required)</u>	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>0</u>		Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1009**

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Herb Stratum (Plot Size : 30)			
1. <u>Cynodon dactylon</u>	2 <input checked="" type="checkbox"/>	100.0%	FACU
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
9. _____	0 <input type="checkbox"/>	0.0%	_____
10. _____	0 <input type="checkbox"/>	0.0%	_____
11. _____	0 <input type="checkbox"/>	0.0%	_____
12. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 1 20% of Total Cover: 0.4	2	= Total Cover	
Woody Vine Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>2</u>	x 4 =	<u>8</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>2</u> (A)		<u>8</u> (B)

Prevalence Index = B/A = 4,000

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1009

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	3/1	100				Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
 - Thin Dark Surface (S9) (LRR S, T, U)
 - Loamy Mucky Mineral (F1) (LRR O)
 - Loamy Gleyed Matrix (F2)
 - Depleted Matrix (F3)
 - Redox Dark Surface (F6)
 - Depleted Dark Surface (F7)
 - Redox Depressions (F8)
 - Marl (F10) (LRR U)
 - Depleted Ochric (F11) (MLRA 151)
 - Iron-Manganese Masses (F12) (LRR O, P, T)
 - Umbric Surface (F13) (LRR P, T, U)
 - Delta Ochric (F17) (MLRA 151)
 - Reduced Vertic (F18) (MLRA 150A, 150B)
 - Piedmont Floodplain Soils (F19) (MLRA 149A)
 - Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
 - 2 cm Muck (A10) (LRR S)
 - Reduced Vertic (F18) (outside MLRA 150A,B)
 - Piedmont Floodplain Soils (F19) (LRR P, S, T)
 - Anomalous Bright Loamy Soils (F20) (MLRA 153B)
 - Red Parent Material (TF2)
 - Very Shallow Dark Surface (TF12)
 - Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/4/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1010
Investigator(s): B. Bringhurst & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Flat **Slope:** 0 % 0.0 °
Subregion (LRR): LRR T **Lat:** 27.909291 **Long:** -97.360346 **Datum:** NAD 83
Soil Map Unit Name: Victoria clay 0 to 1 percent slopes (VCA) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Hydrophytic vegetation, hydric soil, and wetland hydrology are not present. This is not a wetland.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (Minimum of one required; check all that apply)</u>		<u>Secondary Indicators (Minimum of 2 required)</u>	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____		Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1010**

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Herb Stratum (Plot Size : 30)			
1. <u>Cynodon dactylon</u>	2 <input checked="" type="checkbox"/>	100.0%	FACU
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
9. _____	0 <input type="checkbox"/>	0.0%	_____
10. _____	0 <input type="checkbox"/>	0.0%	_____
11. _____	0 <input type="checkbox"/>	0.0%	_____
12. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 1 20% of Total Cover: 0.4	2	= Total Cover	
Woody Vine Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>2</u>	x 4 =	<u>8</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>2</u> (A)		<u>8</u> (B)

Prevalence Index = B/A = 4,000

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1010

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	3/1	100				Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/4/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1011
Investigator(s): B. Bringhurst & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Foothills **Local relief (concave, convex, none):** Convex **Slope:** 3 % 1.7 °
Subregion (LRR): LRR T **Lat:** 27.909398 **Long:** -97.360017 **Datum:** NAD 83
Soil Map Unit Name: Victoria clay 0 to 1 percent slopes (VCA) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Hydrophytic vegetation, hydric soil, and wetland hydrology are not present. This is not a wetland.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (Minimum of one required; check all that apply)</u>		<u>Secondary Indicators (Minimum of 2 required)</u>	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____		Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1011**

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Herb Stratum (Plot Size : 30)			
1. <u>Medicago lupulina</u>	30 <input checked="" type="checkbox"/>	49.2%	UPL
2. <u>Cynodon dactylon</u>	15 <input checked="" type="checkbox"/>	24.6%	FACU
3. <u>Chaerophyllum tainturieri</u>	4 <input type="checkbox"/>	6.6%	FAC
4. <u>Capsella bursa-pastoris</u>	3 <input type="checkbox"/>	4.9%	FACU
5. <u>Taraxacum officinale</u>	3 <input type="checkbox"/>	4.9%	FACU
6. <u>Parietaria pensylvanica</u>	2 <input type="checkbox"/>	3.3%	FACU
7. <u>Rumex crispus</u>	2 <input type="checkbox"/>	3.3%	FAC
8. <u>Lamium amplexicaule</u>	2 <input type="checkbox"/>	3.3%	UPL
9. _____	0 <input type="checkbox"/>	0.0%	_____
10. _____	0 <input type="checkbox"/>	0.0%	_____
11. _____	0 <input type="checkbox"/>	0.0%	_____
12. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 31 20% of Total Cover: 12	61	= Total Cover	
Woody Vine Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 6 x 3 = 18

FACU species 23 x 4 = 92

UPL species 32 x 5 = 160

Column Totals: 2 (A) 8 (B)

Prevalence Index = B/A = 4,000

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1011

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	3/1	100				Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/4/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1012
Investigator(s): B. Bringhurst & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Flat **Slope:** 1 % 0.6 °
Subregion (LRR): LRR T **Lat:** 27.915935 **Long:** -97.359785 **Datum:** NAD 83
Soil Map Unit Name: Orelia fine sandy loam, 0 to 1 percent slopes (Or) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Hydrophytic vegetation and hydric soil are not present. This is not a wetland.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (Minimum of one required; check all that apply)</u>		<u>Secondary Indicators (Minimum of 2 required)</u>	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>0</u>		Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1012**

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Herb Stratum (Plot Size : 30)			
1. <u>Medicago lupulina</u>	25 <input checked="" type="checkbox"/>	46.3%	UPL
2. <u>Capsella bursa-pastoris</u>	15 <input checked="" type="checkbox"/>	27.8%	FACU
3. <u>Andropogon gerardii</u>	5 <input type="checkbox"/>	9.3%	FAC
4. <u>Lamium amplexicaule</u>	3 <input type="checkbox"/>	5.6%	UPL
5. <u>Rumex crispus</u>	3 <input type="checkbox"/>	5.6%	FAC
6. <u>Lvsimachia arvensis</u>	3 <input type="checkbox"/>	5.6%	FACU
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
9. _____	0 <input type="checkbox"/>	0.0%	_____
10. _____	0 <input type="checkbox"/>	0.0%	_____
11. _____	0 <input type="checkbox"/>	0.0%	_____
12. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 27 20% of Total Cover: 11	54	= Total Cover	
Woody Vine Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, ro FAC: 0 (A)

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

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

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 8 x 3 = 24

FACU species 18 x 4 = 72

UPL species 28 x 5 = 140

Column Totals: 61 (A) 270 (B)

Prevalence Index = B/A = 4.426

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1012

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	3/1	100				Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/4/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1013
Investigator(s): B. Bringhurst & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Flat **Slope:** 1 % 0.6 °
Subregion (LRR): LRR T **Lat:** 27.916588 **Long:** -97.359453 **Datum:** NAD 83
Soil Map Unit Name: Orelia fine sandy loam, 0 to 1 percent slopes (Or) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Hydrophytic vegetation, hydric soil, and wetland hydrology are not present. This is not a wetland.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (Minimum of one required; check all that apply)</u>		<u>Secondary Indicators (Minimum of 2 required)</u>	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____		Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1013**

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1. <u>Melia azedarach</u>	10	<input checked="" type="checkbox"/> 50.0%	UPL
2. <u>Prunus persica</u>	5	<input checked="" type="checkbox"/> 25.0%	UPL
3. <u>Celtis laevigata</u>	5	<input checked="" type="checkbox"/> 25.0%	FACW
4. _____	0	<input type="checkbox"/> 0.0%	
5. _____	0	<input type="checkbox"/> 0.0%	
6. _____	0	<input type="checkbox"/> 0.0%	
7. _____	0	<input type="checkbox"/> 0.0%	
8. _____	0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>10</u> 20% of Total Cover: <u>4</u>	<u>20</u>	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1. _____	0	<input type="checkbox"/> 0.0%	
2. _____	0	<input type="checkbox"/> 0.0%	
3. _____	0	<input type="checkbox"/> 0.0%	
4. _____	0	<input type="checkbox"/> 0.0%	
5. _____	0	<input type="checkbox"/> 0.0%	
6. _____	0	<input type="checkbox"/> 0.0%	
7. _____	0	<input type="checkbox"/> 0.0%	
8. _____	0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>	<u>0</u>	= Total Cover	
Shrub Stratum (Plot Size : 30)			
1. _____	0	<input type="checkbox"/> 0.0%	
2. _____	0	<input type="checkbox"/> 0.0%	
3. _____	0	<input type="checkbox"/> 0.0%	
4. _____	0	<input type="checkbox"/> 0.0%	
5. _____	0	<input type="checkbox"/> 0.0%	
6. _____	0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>	<u>0</u>	= Total Cover	
Herb Stratum (Plot Size : 30)			
1. <u>Panicum virgaatum</u>	85	<input checked="" type="checkbox"/> 85.0%	FAC
2. <u>Cynodon dactylon</u>	10	<input type="checkbox"/> 10.0%	FACU
3. <u>Galium aparine</u>	5	<input type="checkbox"/> 5.0%	FACU
4. _____	0	<input type="checkbox"/> 0.0%	
5. _____	0	<input type="checkbox"/> 0.0%	
6. _____	0	<input type="checkbox"/> 0.0%	
7. _____	0	<input type="checkbox"/> 0.0%	
8. _____	0	<input type="checkbox"/> 0.0%	
9. _____	0	<input type="checkbox"/> 0.0%	
10. _____	0	<input type="checkbox"/> 0.0%	
11. _____	0	<input type="checkbox"/> 0.0%	
12. _____	0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>50</u> 20% of Total Cover: <u>20</u>	<u>100</u>	= Total Cover	
Woody Vine Stratum (Plot Size : 30)			
1. _____	0	<input type="checkbox"/> 0.0%	
2. _____	0	<input type="checkbox"/> 0.0%	
3. _____	0	<input type="checkbox"/> 0.0%	
4. _____	0	<input type="checkbox"/> 0.0%	
5. _____	0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>	<u>0</u>	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species 0 x 1 = 0

FACW species 5 x 2 = 10

FAC species 85 x 3 = 255

FACU species 15 x 4 = 60

UPL species 15 x 5 = 75

Column Totals: 54 (A) 236 (B)

Prevalence Index = B/A = 4.370

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1013

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	4/1	100				Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/4/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1014
Investigator(s): B. Bringham & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Flat **Slope:** 0 % 0.0 °
Subregion (LRR): LRR T **Lat:** 27.916485 **Long:** -97.357258 **Datum:** NAD 83
Soil Map Unit Name: Banquete clay, 0 to 1 percent slopes (Ec) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Hydrophytic vegetation, hydric soil, and wetland hydrology are not present. This is not a wetland.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (Minimum of one required; check all that apply)</u>		<u>Secondary Indicators (Minimum of 2 required)</u>	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____		Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1014**

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Herb Stratum (Plot Size : 30)			
1. <u>Cynodon dactylon</u>	2 <input checked="" type="checkbox"/>	100.0%	FACU
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
9. _____	0 <input type="checkbox"/>	0.0%	_____
10. _____	0 <input type="checkbox"/>	0.0%	_____
11. _____	0 <input type="checkbox"/>	0.0%	_____
12. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 1 20% of Total Cover: 0.4	2	= Total Cover	
Woody Vine Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 2 x 4 = 8

UPL species 0 x 5 = 0

Column Totals: 120 (A) 400 (B)

Prevalence Index = B/A = 3.333

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1014

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	3/1	100				Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/4/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1015
Investigator(s): B. Bringham & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Flat **Slope:** 0 % 0.0 °
Subregion (LRR): LRR T **Lat:** 27.923171 **Long:** -97.35699 **Datum:** NAD 83
Soil Map Unit Name: Orelia fine sandy loam, 0 to 1 percent slopes (Or) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Hydrophytic vegetation and hydric soil are not present. This is not a wetland.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (Minimum of one required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<u>Secondary Indicators (Minimum of 2 required)</u> <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>4</u>	Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1015**

		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)				
1.	_____	0	<input type="checkbox"/>	0.0%
2.	_____	0	<input type="checkbox"/>	0.0%
3.	_____	0	<input type="checkbox"/>	0.0%
4.	_____	0	<input type="checkbox"/>	0.0%
5.	_____	0	<input type="checkbox"/>	0.0%
6.	_____	0	<input type="checkbox"/>	0.0%
7.	_____	0	<input type="checkbox"/>	0.0%
8.	_____	0	<input type="checkbox"/>	0.0%
50% of Total Cover: 0	20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)				
1.	_____	0	<input type="checkbox"/>	0.0%
2.	_____	0	<input type="checkbox"/>	0.0%
3.	_____	0	<input type="checkbox"/>	0.0%
4.	_____	0	<input type="checkbox"/>	0.0%
5.	_____	0	<input type="checkbox"/>	0.0%
6.	_____	0	<input type="checkbox"/>	0.0%
7.	_____	0	<input type="checkbox"/>	0.0%
8.	_____	0	<input type="checkbox"/>	0.0%
50% of Total Cover: 0	20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot Size : 30)				
1.	_____	0	<input type="checkbox"/>	0.0%
2.	_____	0	<input type="checkbox"/>	0.0%
3.	_____	0	<input type="checkbox"/>	0.0%
4.	_____	0	<input type="checkbox"/>	0.0%
5.	_____	0	<input type="checkbox"/>	0.0%
6.	_____	0	<input type="checkbox"/>	0.0%
50% of Total Cover: 0	20% of Total Cover: 0	0	= Total Cover	
Herb Stratum (Plot Size : 30)				
1.	Cynodon dactylon	2	<input checked="" type="checkbox"/>	100.0% FACU
2.	_____	0	<input type="checkbox"/>	0.0%
3.	_____	0	<input type="checkbox"/>	0.0%
4.	_____	0	<input type="checkbox"/>	0.0%
5.	_____	0	<input type="checkbox"/>	0.0%
6.	_____	0	<input type="checkbox"/>	0.0%
7.	_____	0	<input type="checkbox"/>	0.0%
8.	_____	0	<input type="checkbox"/>	0.0%
9.	_____	0	<input type="checkbox"/>	0.0%
10.	_____	0	<input type="checkbox"/>	0.0%
11.	_____	0	<input type="checkbox"/>	0.0%
12.	_____	0	<input type="checkbox"/>	0.0%
50% of Total Cover: 1	20% of Total Cover: 0.4	2	= Total Cover	
Woody Vine Stratum (Plot Size : 30)				
1.	_____	0	<input type="checkbox"/>	0.0%
2.	_____	0	<input type="checkbox"/>	0.0%
3.	_____	0	<input type="checkbox"/>	0.0%
4.	_____	0	<input type="checkbox"/>	0.0%
5.	_____	0	<input type="checkbox"/>	0.0%
50% of Total Cover: 0	20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>2</u>	x 4 = <u>8</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>2</u> (A)	<u>8</u> (B)

Prevalence Index = B/A = 4,000

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1015

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	3/1	100				Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/4/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1016
Investigator(s): B. Bringhurst & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Flat **Slope:** 0 % 0.0 °
Subregion (LRR): LRR T **Lat:** 27.923649 **Long:** -97.345953 **Datum:** NAD 83
Soil Map Unit Name: Victoria clay 0 to 1 percent slopes (VcA) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
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Remarks:
Hydrophytic vegetation and hydric soil are not present. This is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:	
<u>Primary Indicators (Minimum of one required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (Minimum of 2 required)</u> <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)

Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>4</u>	Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>
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Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1016**

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Herb Stratum (Plot Size : 30)			
1. <u>Cynodon dactylon</u>	2 <input checked="" type="checkbox"/>	100.0%	FACU
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
9. _____	0 <input type="checkbox"/>	0.0%	_____
10. _____	0 <input type="checkbox"/>	0.0%	_____
11. _____	0 <input type="checkbox"/>	0.0%	_____
12. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 1 20% of Total Cover: 0.4	2	= Total Cover	
Woody Vine Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>2</u>	x 4 =	<u>8</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>2</u>	(A)	<u>8</u> (B)

Prevalence Index = B/A = 4,000

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1016

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	3/1	100				Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/4/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1017
Investigator(s): B. Bringhurst & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Flat **Slope:** 1 % 0.6 °
Subregion (LRR): LRR T **Lat:** 27.923561 **Long:** -97.343774 **Datum:** NAD 83
Soil Map Unit Name: Victoria clay 0 to 1 percent slopes (VCA) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Hydric soil is not present. This is not a wetland.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (Minimum of one required; check all that apply)</u>		<u>Secondary Indicators (Minimum of 2 required)</u>	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>4</u>		Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1017**

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Herb Stratum (Plot Size : 30)			
1. <u>Panicum virgatum</u>	70 <input checked="" type="checkbox"/>	70.0%	FAC
2. <u>Taraxacum officinale</u>	10 <input type="checkbox"/>	10.0%	FACU
3. <u>Rumex crispus</u>	5 <input type="checkbox"/>	5.0%	FAC
4. <u>Dichanthium aristatum</u>	5 <input type="checkbox"/>	5.0%	FACU
5. <u>Bothriochloa ischaemum var. songarica</u>	5 <input type="checkbox"/>	5.0%	UPL
6. <u>Xanthium strumarium</u>	5 <input type="checkbox"/>	5.0%	FAC
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
9. _____	0 <input type="checkbox"/>	0.0%	_____
10. _____	0 <input type="checkbox"/>	0.0%	_____
11. _____	0 <input type="checkbox"/>	0.0%	_____
12. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 50 20% of Total Cover: 20	100	= Total Cover	
Woody Vine Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 80 x 3 = 240

FACU species 15 x 4 = 60

UPL species 5 x 5 = 25

Column Totals: 2 (A) 8 (B)

Prevalence Index = B/A = 4,000

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1017

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	4/1	100				Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/4/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1018
Investigator(s): B. Bringhurst & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Flat **Slope:** 0 % 0.0 °
Subregion (LRR): LRR T **Lat:** 27.931203 **Long:** -97.343693 **Datum:** NAD 83
Soil Map Unit Name: Victoria clay 0 to 1 percent slopes (VcA) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Hydrophytic vegetation and hydric soil are not present. This is not a wetland.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (Minimum of one required; check all that apply)</u>		<u>Secondary Indicators (Minimum of 2 required)</u>	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>0</u>		Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1018**

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Herb Stratum (Plot Size : 30)			
1. <u>Cynodon dactylon</u>	2 <input checked="" type="checkbox"/>	100.0%	FACU
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
9. _____	0 <input type="checkbox"/>	0.0%	_____
10. _____	0 <input type="checkbox"/>	0.0%	_____
11. _____	0 <input type="checkbox"/>	0.0%	_____
12. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 1 20% of Total Cover: 0.4	2	= Total Cover	
Woody Vine Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

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

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

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 2 x 4 = 8

UPL species 0 x 5 = 0

Column Totals: 2 (A) 8 (B)

Prevalence Index = B/A = 4,000

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1018

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	3/1	100				Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/5/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1019
Investigator(s): B. Bringhurst & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Flat **Slope:** 0 % 0.0 °
Subregion (LRR): LRR T **Lat:** 27.933161 **Long:** -97.343402 **Datum:** NAD 83
Soil Map Unit Name: Victoria clay 0 to 1 percent slopes (VcA) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Hydrophytic vegetation and hydric soil are not present. This is not a wetland.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (Minimum of one required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<u>Secondary Indicators (Minimum of 2 required)</u> <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>0</u>	Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1019**

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Herb Stratum (Plot Size : 30)			
1. <u>Cynodon dactylon</u>	2 <input checked="" type="checkbox"/>	100.0%	FACU
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
9. _____	0 <input type="checkbox"/>	0.0%	_____
10. _____	0 <input type="checkbox"/>	0.0%	_____
11. _____	0 <input type="checkbox"/>	0.0%	_____
12. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 1 20% of Total Cover: 0.4	2	= Total Cover	
Woody Vine Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>2</u>	x 4 =	<u>8</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>2</u> (A)		<u>8</u> (B)

Prevalence Index = B/A = 4,000

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1019

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	3/1	100				Silty Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/5/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1020
Investigator(s): B. Bringhurst & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Flat **Slope:** 0 % 0.0 °
Subregion (LRR): LRR T **Lat:** 27.938319 **Long:** -97.340405 **Datum:** NAD 83
Soil Map Unit Name: Victoria clay, depressional (Vd) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Hydrophytic vegetation and hydric soil are not present. This is not a wetland.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (Minimum of one required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<u>Secondary Indicators (Minimum of 2 required)</u> <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>0</u>	Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1020**

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Herb Stratum (Plot Size : 30)			
1. <u>Cynodon dactylon</u>	2 <input checked="" type="checkbox"/>	100.0%	FACU
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
9. _____	0 <input type="checkbox"/>	0.0%	_____
10. _____	0 <input type="checkbox"/>	0.0%	_____
11. _____	0 <input type="checkbox"/>	0.0%	_____
12. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 1 20% of Total Cover: 0.4	2	= Total Cover	
Woody Vine Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>2</u>	x 4 =	<u>8</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>2</u>	(A)	<u>8</u> (B)

Prevalence Index = B/A = 4,000

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1020

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	3/1	100				Silty Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/5/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1021
Investigator(s): B. Bringhurst & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Flat **Slope:** 0 % 0.0 °
Subregion (LRR): LRR T **Lat:** 27.943445 **Long:** -97.337308 **Datum:** NAD 83
Soil Map Unit Name: Victoria clay 0 to 1 percent slopes (VCA) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Hydrophytic vegetation and hydric soil are not present. This is not a wetland.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (Minimum of one required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<u>Secondary Indicators (Minimum of 2 required)</u> <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>4</u>	Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1021**

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Herb Stratum (Plot Size : 30)			
1. <u>Cynodon dactylon</u>	2 <input checked="" type="checkbox"/>	100.0%	FACU
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
9. _____	0 <input type="checkbox"/>	0.0%	_____
10. _____	0 <input type="checkbox"/>	0.0%	_____
11. _____	0 <input type="checkbox"/>	0.0%	_____
12. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 1 20% of Total Cover: 0.4	2	= Total Cover	
Woody Vine Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 2 x 4 = 8

UPL species 0 x 5 = 0

Column Totals: 2 (A) 8 (B)

Prevalence Index = B/A = 4,000

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1021

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	3/1	100				Silty Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/5/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1022
Investigator(s): B. Bringham & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Flat **Slope:** 1 % 0.6 °
Subregion (LRR): LRR T **Lat:** 27.945928 **Long:** -97.335708 **Datum:** NAD 83
Soil Map Unit Name: Victoria clay, depressional (Vd) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Hydrophytic vegetation, hydric soil, and wetland hydrology are not present. This is not a wetland.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (Minimum of one required; check all that apply)</u>		<u>Secondary Indicators (Minimum of 2 required)</u>	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____		Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1022**

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0	20% of Total Cover: 0	0	= Total Cover
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0	20% of Total Cover: 0	0	= Total Cover
Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0	20% of Total Cover: 0	0	= Total Cover
Herb Stratum (Plot Size : 30)			
1. <u>Bothriochloa ischaemum var. sonarica</u>	75 <input checked="" type="checkbox"/>	75.0%	UPL
2. <u>Andropogon aeradji</u>	20 <input checked="" type="checkbox"/>	20.0%	FAC
3. <u>Sabal minor</u>	5 <input type="checkbox"/>	5.0%	FACW
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
9. _____	0 <input type="checkbox"/>	0.0%	_____
10. _____	0 <input type="checkbox"/>	0.0%	_____
11. _____	0 <input type="checkbox"/>	0.0%	_____
12. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 50	20% of Total Cover: 20	100	= Total Cover
Woody Vine Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0	20% of Total Cover: 0	0	= Total Cover

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, ro FAC: 0 (A)

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

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

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species 0 x 1 = 0

FACW species 5 x 2 = 10

FAC species 20 x 3 = 60

FACU species 0 x 4 = 0

UPL species 75 x 5 = 375

Column Totals: 2 (A) 8 (B)

Prevalence Index = B/A = 4,000

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1022

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Location ²		
0 - 4	10YR	3/1	100				Silty Clay	
4 - 8	10YR	3/4	100				Silty Clay	
8 - 16	10YR	6/2	100				Silty Clay	gravel

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (If observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/5/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1023
Investigator(s): B. Bringhurst & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Flat **Slope:** 1 % 0.6 °
Subregion (LRR): LRR T **Lat:** 27.946483 **Long:** -97.335401 **Datum:** NAD 83
Soil Map Unit Name: Victoria clay, depressional (Vd) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
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Remarks:
 Hydrophytic vegetation, hydric soil, and wetland hydrology are not present. This is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:	
<u>Primary Indicators (Minimum of one required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (Minimum of 2 required)</u> <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)

Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>
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Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1023**

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Herb Stratum (Plot Size : 30)			
1. <u>Medicago lupulina</u>	47 <input checked="" type="checkbox"/>	47.0%	UPL
2. <u>Bothriochloa ischaemum var. songarica</u>	45 <input checked="" type="checkbox"/>	45.0%	UPL
3. <u>Chaerophyllum tainturieri</u>	5 <input type="checkbox"/>	5.0%	FAC
4. <u>Lvsimachia arvensis</u>	3 <input type="checkbox"/>	3.0%	FACU
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
9. _____	0 <input type="checkbox"/>	0.0%	_____
10. _____	0 <input type="checkbox"/>	0.0%	_____
11. _____	0 <input type="checkbox"/>	0.0%	_____
12. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 50 20% of Total Cover: 20	100	= Total Cover	
Woody Vine Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, ro FAC: 1 (A)

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

Percent of Dominant Species That are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>5</u>	x 3 =	<u>15</u>
FACU species <u>3</u>	x 4 =	<u>12</u>
UPL species <u>92</u>	x 5 =	<u>460</u>
Column Totals: <u>100</u>	(A)	<u>445</u> (B)

Prevalence Index = B/A = 4.450

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1023

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	4/1	100				Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
 - Thin Dark Surface (S9) (LRR S, T, U)
 - Loamy Mucky Mineral (F1) (LRR O)
 - Loamy Gleyed Matrix (F2)
 - Depleted Matrix (F3)
 - Redox Dark Surface (F6)
 - Depleted Dark Surface (F7)
 - Redox Depressions (F8)
 - Marl (F10) (LRR U)
 - Depleted Ochric (F11) (MLRA 151)
 - Iron-Manganese Masses (F12) (LRR O, P, T)
 - Umbric Surface (F13) (LRR P, T, U)
 - Delta Ochric (F17) (MLRA 151)
 - Reduced Vertic (F18) (MLRA 150A, 150B)
 - Piedmont Floodplain Soils (F19) (MLRA 149A)
 - Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
 - 2 cm Muck (A10) (LRR S)
 - Reduced Vertic (F18) (outside MLRA 150A,B)
 - Piedmont Floodplain Soils (F19) (LRR P, S, T)
 - Anomalous Bright Loamy Soils (F20) (MLRA 153B)
 - Red Parent Material (TF2)
 - Very Shallow Dark Surface (TF12)
 - Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/5/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1024
Investigator(s): B. Bringhurst & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Flat **Slope:** 0 % 0.0 °
Subregion (LRR): LRR T **Lat:** 27.947333 **Long:** -97.334527 **Datum:** NAD 83
Soil Map Unit Name: Victoria clay, depressional (Vd) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Hydrophytic vegetation and hydric soil are not present. This is not a wetland.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (Minimum of one required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<u>Secondary Indicators (Minimum of 2 required)</u> <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>2</u>	Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1024**

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Herb Stratum (Plot Size : 30)			
1. <u>Lamium amplexicaule</u>	15 <input checked="" type="checkbox"/>	45.5%	UPL
2. <u>Zea mays</u>	10 <input checked="" type="checkbox"/>	30.3%	UPL
3. <u>Taraxacum officinale</u>	5 <input type="checkbox"/>	15.2%	FACU
4. <u>Capsella bursa-pastoris</u>	3 <input type="checkbox"/>	9.1%	FACU
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
9. _____	0 <input type="checkbox"/>	0.0%	_____
10. _____	0 <input type="checkbox"/>	0.0%	_____
11. _____	0 <input type="checkbox"/>	0.0%	_____
12. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 17 20% of Total Cover: 6.6	33	= Total Cover	
Woody Vine Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, ro FAC: 0 (A)

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

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

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 8 x 4 = 32

UPL species 25 x 5 = 125

Column Totals: 100 (A) 487 (B)

Prevalence Index = B/A = 4.870

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1024

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	3/1	100				Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/5/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1025
Investigator(s): B. Bringhurst & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Flat **Slope:** 0 % 0.0 °
Subregion (LRR): LRR T **Lat:** 27.952384 **Long:** -97.332093 **Datum:** NAD 83
Soil Map Unit Name: Victoria clay, depressional (Vd) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Hydrophytic vegetation, hydric soil, and wetland hydrology are not present. This is not a wetland.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (Minimum of one required; check all that apply)</u>		<u>Secondary Indicators (Minimum of 2 required)</u>	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____		Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1025**

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Herb Stratum (Plot Size : 30)			
1. Zea mays _____	3 <input checked="" type="checkbox"/>	100.0%	UPL
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
9. _____	0 <input type="checkbox"/>	0.0%	_____
10. _____	0 <input type="checkbox"/>	0.0%	_____
11. _____	0 <input type="checkbox"/>	0.0%	_____
12. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 1.5 20% of Total Cover: 0.6	3	= Total Cover	
Woody Vine Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, ro FAC: 0 (A)

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

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

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 0 x 4 = 0

UPL species 3 x 5 = 15

Column Totals: 33 (A) 157 (B)

Prevalence Index = B/A = 4.758

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1025

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	3/1	100				Silty Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/5/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1026
Investigator(s): B. Bringhurst & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Convex **Slope:** 1 % 0.6 °
Subregion (LRR): LRR T **Lat:** 27.955422 **Long:** -97.328304 **Datum:** NAD 83
Soil Map Unit Name: Victoria clay 0 to 1 percent slopes (VCA) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
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Remarks:
 Hydrophytic vegetation, hydric soil, and wetland hydrology are not present. This is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:	
<u>Primary Indicators (Minimum of one required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (Minimum of 2 required)</u> <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)

Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>
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Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1026**

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot Size : 30)			
1. <u>Celtis pallida</u>	10 <input checked="" type="checkbox"/>	28.6%	UPL
2. <u>Diospyros texana</u>	10 <input checked="" type="checkbox"/>	28.6%	UPL
3. <u>Parkinsonia aculeata</u>	5 <input type="checkbox"/>	14.3%	FAC
4. <u>Celtis laevigata</u>	5 <input type="checkbox"/>	14.3%	FACW
5. <u>Zanthoxylum faagara</u>	5 <input type="checkbox"/>	14.3%	FACU
6. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 18 20% of Total Cover: 7	35	= Total Cover	
Herb Stratum (Plot Size : 30)			
1. <u>Solanum triquetrum</u>	20 <input checked="" type="checkbox"/>	40.0%	UPL
2. <u>Helianthus annuus</u>	10 <input checked="" type="checkbox"/>	20.0%	FAC
3. <u>Cynodon dactylon</u>	10 <input checked="" type="checkbox"/>	20.0%	FACU
4. <u>Taraxacum officinale</u>	5 <input type="checkbox"/>	10.0%	FACU
5. <u>Taraxacum officinale</u>	5 <input type="checkbox"/>	10.0%	FACU
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
9. _____	0 <input type="checkbox"/>	0.0%	_____
10. _____	0 <input type="checkbox"/>	0.0%	_____
11. _____	0 <input type="checkbox"/>	0.0%	_____
12. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 25 20% of Total Cover: 10	50	= Total Cover	
Woody Vine Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species 0 x 1 = 0

FACW species 5 x 2 = 10

FAC species 15 x 3 = 45

FACU species 25 x 4 = 100

UPL species 40 x 5 = 200

Column Totals: 3 (A) 15 (B)

Prevalence Index = B/A = 5,000

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1026

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	3/1	100				Silty Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/5/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1027
Investigator(s): B. Bringhurst & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Flat **Slope:** 0 % 0.0 °
Subregion (LRR): LRR T **Lat:** 27.954153 **Long:** -97.323746 **Datum:** NAD 83
Soil Map Unit Name: Papalote fine sandy loam, 0 to 1 percent slopes (PaA) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>	
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>	

Remarks:
Hydrophytic vegetation, hydric soil, and wetland hydrology are not present. This is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:	
<u>Primary Indicators (Minimum of one required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (Minimum of 2 required)</u> <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)

Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>
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Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Herb Stratum (Plot Size : 30)			
1. Zea mays	2 <input checked="" type="checkbox"/>	100.0%	UPL
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
9. _____	0 <input type="checkbox"/>	0.0%	_____
10. _____	0 <input type="checkbox"/>	0.0%	_____
11. _____	0 <input type="checkbox"/>	0.0%	_____
12. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 1 20% of Total Cover: 0.4	2	= Total Cover	
Woody Vine Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, ro FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 20.0% (A/B)

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 0 x 4 = 0

UPL species 2 x 5 = 10

Colum Totals: 85 (A) 355 (B)

Prevalence Index = B/A = 4,176

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1027

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	3/1	100				Silty Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/5/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1028
Investigator(s): B. Bringhurst & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Flat **Slope:** 0 % 0.0 °
Subregion (LRR): LRR T **Lat:** 27.951271 **Long:** -97.315907 **Datum:** NAD 83
Soil Map Unit Name: Victoria clay 0 to 1 percent slopes (VCA) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Hydrophytic vegetation, hydric soil, and wetland hydrology are not present. This is not a wetland.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (Minimum of one required; check all that apply)</u>		<u>Secondary Indicators (Minimum of 2 required)</u>	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____		Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1028**

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Herb Stratum (Plot Size : 30)			
1. <u>Cynodon dactylon</u>	2 <input checked="" type="checkbox"/>	100.0%	FACU
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
9. _____	0 <input type="checkbox"/>	0.0%	_____
10. _____	0 <input type="checkbox"/>	0.0%	_____
11. _____	0 <input type="checkbox"/>	0.0%	_____
12. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 1 20% of Total Cover: 0.4	2	= Total Cover	
Woody Vine Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 2 x 4 = 8

UPL species 0 x 5 = 0

Column Totals: 2 (A) 10 (B)

Prevalence Index = B/A = 5,000

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1028

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	3/1	100				Silty Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/5/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1029
Investigator(s): B. Bringhurst & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Flat **Slope:** 0 % 0.0 °
Subregion (LRR): LRR T **Lat:** 27.94764 **Long:** -97.305608 **Datum:** NAD 83
Soil Map Unit Name: Victoria clay 0 to 1 percent slopes (VCA) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Hydrophytic vegetation and hydric soil are not present. This is not a wetland.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (Minimum of one required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<u>Secondary Indicators (Minimum of 2 required)</u> <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>2</u>	Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1029**

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Herb Stratum (Plot Size : 30)			
1. Zea mays	2 <input checked="" type="checkbox"/>	100.0%	UPL
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
9. _____	0 <input type="checkbox"/>	0.0%	_____
10. _____	0 <input type="checkbox"/>	0.0%	_____
11. _____	0 <input type="checkbox"/>	0.0%	_____
12. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 1 20% of Total Cover: 0.4	2	= Total Cover	
Woody Vine Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, ro FAC: 0 (A)

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>2</u>	x 5 =	<u>10</u>
Column Totals: <u>2</u>	(A)	<u>8</u> (B)

Prevalence Index = B/A = 4,000

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1029

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	3/1	100				Silty Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
 ag field

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/5/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1030
Investigator(s): B. Bringhurst & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Flat **Slope:** 0 % 0.0 °
Subregion (LRR): LRR T **Lat:** 27.943299 **Long:** -97.294254 **Datum:** NAD 83
Soil Map Unit Name: Victoria clay 0 to 1 percent slopes (VcA) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Hydrophytic vegetation and hydric soil are not present. This is not a wetland.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (Minimum of one required; check all that apply)</u>		<u>Secondary Indicators (Minimum of 2 required)</u>	
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>2</u> Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____		Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1030**

		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)				
1.	_____	0	<input type="checkbox"/>	0.0%
2.	_____	0	<input type="checkbox"/>	0.0%
3.	_____	0	<input type="checkbox"/>	0.0%
4.	_____	0	<input type="checkbox"/>	0.0%
5.	_____	0	<input type="checkbox"/>	0.0%
6.	_____	0	<input type="checkbox"/>	0.0%
7.	_____	0	<input type="checkbox"/>	0.0%
8.	_____	0	<input type="checkbox"/>	0.0%
50% of Total Cover:	0	20% of Total Cover:	0	0
		0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)				
1.	_____	0	<input type="checkbox"/>	0.0%
2.	_____	0	<input type="checkbox"/>	0.0%
3.	_____	0	<input type="checkbox"/>	0.0%
4.	_____	0	<input type="checkbox"/>	0.0%
5.	_____	0	<input type="checkbox"/>	0.0%
6.	_____	0	<input type="checkbox"/>	0.0%
7.	_____	0	<input type="checkbox"/>	0.0%
8.	_____	0	<input type="checkbox"/>	0.0%
50% of Total Cover:	0	20% of Total Cover:	0	0
		0	= Total Cover	
Shrub Stratum (Plot Size : 30)				
1.	_____	0	<input type="checkbox"/>	0.0%
2.	_____	0	<input type="checkbox"/>	0.0%
3.	_____	0	<input type="checkbox"/>	0.0%
4.	_____	0	<input type="checkbox"/>	0.0%
5.	_____	0	<input type="checkbox"/>	0.0%
6.	_____	0	<input type="checkbox"/>	0.0%
50% of Total Cover:	0	20% of Total Cover:	0	0
		0	= Total Cover	
Herb Stratum (Plot Size : 30)				
1.	Parthenium hysterophorus	10	<input checked="" type="checkbox"/>	66.7% FAC
2.	Capsella bursa-pastoris	5	<input checked="" type="checkbox"/>	33.3% FACU
3.	_____	0	<input type="checkbox"/>	0.0%
4.	_____	0	<input type="checkbox"/>	0.0%
5.	_____	0	<input type="checkbox"/>	0.0%
6.	_____	0	<input type="checkbox"/>	0.0%
7.	_____	0	<input type="checkbox"/>	0.0%
8.	_____	0	<input type="checkbox"/>	0.0%
9.	_____	0	<input type="checkbox"/>	0.0%
10.	_____	0	<input type="checkbox"/>	0.0%
11.	_____	0	<input type="checkbox"/>	0.0%
12.	_____	0	<input type="checkbox"/>	0.0%
50% of Total Cover:	7.5	20% of Total Cover:	3	15
		15	= Total Cover	
Woody Vine Stratum (Plot Size : 30)				
1.	_____	0	<input type="checkbox"/>	0.0%
2.	_____	0	<input type="checkbox"/>	0.0%
3.	_____	0	<input type="checkbox"/>	0.0%
4.	_____	0	<input type="checkbox"/>	0.0%
5.	_____	0	<input type="checkbox"/>	0.0%
50% of Total Cover:	0	20% of Total Cover:	0	0
		0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, ro FAC: 0 (A)

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 10	x 3 = 30
FACU species 5	x 4 = 20
UPL species 0	x 5 = 0
Column Totals: 2 (A)	10 (B)

Prevalence Index = B/A = 5,000

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1030

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	3/1	100				Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
 ag field

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/5/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1031
Investigator(s): B. Bringhurst & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Flat **Slope:** 0 % 0.0 °
Subregion (LRR): LRR T **Lat:** 27.942073 **Long:** -97.290312 **Datum:** NAD 83
Soil Map Unit Name: Victoria clay 0 to 1 percent slopes (VCA) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Hydrophytic vegetation, hydric soil, and wetland hydrology are not present. This is not a wetland.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (Minimum of one required; check all that apply)</u>		<u>Secondary Indicators (Minimum of 2 required)</u>	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____		Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1031**

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Herb Stratum (Plot Size : 30)			
1. <u>Parthenium hysterophorus</u>	5 <input checked="" type="checkbox"/>	55.6%	FAC
2. <u>Capsella bursa-pastoris</u>	2 <input checked="" type="checkbox"/>	22.2%	FACU
3. <u>Medicago lupulina</u>	2 <input checked="" type="checkbox"/>	22.2%	UPL
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
9. _____	0 <input type="checkbox"/>	0.0%	_____
10. _____	0 <input type="checkbox"/>	0.0%	_____
11. _____	0 <input type="checkbox"/>	0.0%	_____
12. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 4.5 20% of Total Cover: 1.8	9	= Total Cover	
Woody Vine Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, ro FAC: 1 (A)

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

Percent of Dominant Species That are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 5 x 3 = 15

FACU species 2 x 4 = 8

UPL species 2 x 5 = 10

Column Totals: 15 (A) 50 (B)

Prevalence Index = B/A = 3.333

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1031

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	3/1	100				Silty Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
 ag field

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/5/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1032
Investigator(s): B. Bringhurst & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Flat **Slope:** 1 % 0.6 °
Subregion (LRR): LRR T **Lat:** 27.941792 **Long:** -97.290441 **Datum:** NAD 83
Soil Map Unit Name: Victoria clay 0 to 1 percent slopes (VCA) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Hydrophytic vegetation, hydric soil, and wetland hydrology are not present. This is not a wetland.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (Minimum of one required; check all that apply)</u>		<u>Secondary Indicators (Minimum of 2 required)</u>	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____		Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1032**

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Herb Stratum (Plot Size : 30)			
1. <u>Medicago lupulina</u>	45 <input checked="" type="checkbox"/>	54.2%	UPL
2. <u>Capsella bursa-pastoris</u>	20 <input checked="" type="checkbox"/>	24.1%	FACU
3. <u>Malva parviflora</u>	10 <input type="checkbox"/>	12.0%	UPL
4. <u>Parthenium hysterophorus</u>	5 <input type="checkbox"/>	6.0%	FAC
5. <u>Taraxacum officinale</u>	3 <input type="checkbox"/>	3.6%	FACU
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
9. _____	0 <input type="checkbox"/>	0.0%	_____
10. _____	0 <input type="checkbox"/>	0.0%	_____
11. _____	0 <input type="checkbox"/>	0.0%	_____
12. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 42 20% of Total Cover: 17	83	= Total Cover	
Woody Vine Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

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

Percent of Dominant Species That are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 5 x 3 = 15

FACU species 23 x 4 = 92

UPL species 55 x 5 = 275

Column Totals: 9 (A) 33 (B)

Prevalence Index = B/A = 3.667

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1032

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	3/1	100				Silty Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/5/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1033
Investigator(s): B. Bringhurst & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Flat **Slope:** 1 % 0.6 °
Subregion (LRR): LRR T **Lat:** 27.938251 **Long:** -97.279783 **Datum:** NAD 83
Soil Map Unit Name: Victoria clay 0 to 1 percent slopes (VcA) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Hydrophytic vegetation and hydric soil are not present. This is not a wetland.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (Minimum of one required; check all that apply)</u>		<u>Secondary Indicators (Minimum of 2 required)</u>	
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
Field Observations: Surface Water Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>1</u> Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>0</u>		Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1033**

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Herb Stratum (Plot Size : 30)			
1. <u>Cynodon dactylon</u>	2 <input checked="" type="checkbox"/>	100.0%	FACU
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
9. _____	0 <input type="checkbox"/>	0.0%	_____
10. _____	0 <input type="checkbox"/>	0.0%	_____
11. _____	0 <input type="checkbox"/>	0.0%	_____
12. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 1 20% of Total Cover: 0.4	2	= Total Cover	
Woody Vine Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 2 x 4 = 8

UPL species 0 x 5 = 0

Column Totals: 83 (A) 382 (B)

Prevalence Index = B/A = 4,602

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1033

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	3/1	100				Silty Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
 - Thin Dark Surface (S9) (LRR S, T, U)
 - Loamy Mucky Mineral (F1) (LRR O)
 - Loamy Gleyed Matrix (F2)
 - Depleted Matrix (F3)
 - Redox Dark Surface (F6)
 - Depleted Dark Surface (F7)
 - Redox Depressions (F8)
 - Marl (F10) (LRR U)
 - Depleted Ochric (F11) (MLRA 151)
 - Iron-Manganese Masses (F12) (LRR O, P, T)
 - Umbric Surface (F13) (LRR P, T, U)
 - Delta Ochric (F17) (MLRA 151)
 - Reduced Vertic (F18) (MLRA 150A, 150B)
 - Piedmont Floodplain Soils (F19) (MLRA 149A)
 - Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
 - 2 cm Muck (A10) (LRR S)
 - Reduced Vertic (F18) (outside MLRA 150A,B)
 - Piedmont Floodplain Soils (F19) (LRR P, S, T)
 - Anomalous Bright Loamy Soils (F20) (MLRA 153B)
 - Red Parent Material (TF2)
 - Very Shallow Dark Surface (TF12)
 - Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
 ag field

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/5/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1034
Investigator(s): B. Bringhurst & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Flat **Slope:** 0 % 0.0 °
Subregion (LRR): LRR T **Lat:** 27.935239 **Long:** -97.271985 **Datum:** NAD 83
Soil Map Unit Name: Victoria clay 0 to 1 percent slopes (VCA) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
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Remarks:
Hydrophytic vegetation, hydric soil, and wetland hydrology are not present. This is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:	
<u>Primary Indicators (Minimum of one required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (Minimum of 2 required)</u> <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)

Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>
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Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1.	0	<input type="checkbox"/> 0.0%	
2.	0	<input type="checkbox"/> 0.0%	
3.	0	<input type="checkbox"/> 0.0%	
4.	0	<input type="checkbox"/> 0.0%	
5.	0	<input type="checkbox"/> 0.0%	
6.	0	<input type="checkbox"/> 0.0%	
7.	0	<input type="checkbox"/> 0.0%	
8.	0	<input type="checkbox"/> 0.0%	
50% of Total Cover: 0	20% of Total Cover: 0	0	= Total Cover
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1.	0	<input type="checkbox"/> 0.0%	
2.	0	<input type="checkbox"/> 0.0%	
3.	0	<input type="checkbox"/> 0.0%	
4.	0	<input type="checkbox"/> 0.0%	
5.	0	<input type="checkbox"/> 0.0%	
6.	0	<input type="checkbox"/> 0.0%	
7.	0	<input type="checkbox"/> 0.0%	
8.	0	<input type="checkbox"/> 0.0%	
50% of Total Cover: 0	20% of Total Cover: 0	0	= Total Cover
Shrub Stratum (Plot Size : 30)			
1.	0	<input type="checkbox"/> 0.0%	
2.	0	<input type="checkbox"/> 0.0%	
3.	0	<input type="checkbox"/> 0.0%	
4.	0	<input type="checkbox"/> 0.0%	
5.	0	<input type="checkbox"/> 0.0%	
6.	0	<input type="checkbox"/> 0.0%	
50% of Total Cover: 0	20% of Total Cover: 0	0	= Total Cover
Herb Stratum (Plot Size : 30)			
1. <i>Cynodon dactylon</i>	2	<input checked="" type="checkbox"/> 100.0%	FACU
2.	0	<input type="checkbox"/> 0.0%	
3.	0	<input type="checkbox"/> 0.0%	
4.	0	<input type="checkbox"/> 0.0%	
5.	0	<input type="checkbox"/> 0.0%	
6.	0	<input type="checkbox"/> 0.0%	
7.	0	<input type="checkbox"/> 0.0%	
8.	0	<input type="checkbox"/> 0.0%	
9.	0	<input type="checkbox"/> 0.0%	
10.	0	<input type="checkbox"/> 0.0%	
11.	0	<input type="checkbox"/> 0.0%	
12.	0	<input type="checkbox"/> 0.0%	
50% of Total Cover: 1	20% of Total Cover: 0.4	2	= Total Cover
Woody Vine Stratum (Plot Size : 30)			
1.	0	<input type="checkbox"/> 0.0%	
2.	0	<input type="checkbox"/> 0.0%	
3.	0	<input type="checkbox"/> 0.0%	
4.	0	<input type="checkbox"/> 0.0%	
5.	0	<input type="checkbox"/> 0.0%	
50% of Total Cover: 0	20% of Total Cover: 0	0	= Total Cover

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>2</u>	x 4 =	<u>8</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>2</u>	(A)	<u>8</u> (B)

Prevalence Index = B/A = 4,000

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: **UPP1034**

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	3/1	100				Silty Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
 ag field

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/6/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1035
Investigator(s): B. Bringham & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Convex **Slope:** 1 % 0.6 °
Subregion (LRR): LRR T **Lat:** 27.933222 **Long:** -97.268763 **Datum:** NAD 83
Soil Map Unit Name: Banquete clay, 0 to 1 percent slopes (Ec) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Hydrophytic vegetation, hydric soil, and wetland hydrology are not present. This is not a wetland.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (Minimum of one required; check all that apply)</u>		<u>Secondary Indicators (Minimum of 2 required)</u>	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____		Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1035**

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot Size : 30)			
1. <u>Vachellia farnesiana</u>	10 <input checked="" type="checkbox"/>	76.9%	FACU
2. <u>Prosopis glandulosa</u>	3 <input checked="" type="checkbox"/>	23.1%	UPL
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 6.5 20% of Total Cover: 2.6	13	= Total Cover	
Herb Stratum (Plot Size : 30)			
1. <u>Bothriochloa ischaemum var. sonarica</u>	40 <input checked="" type="checkbox"/>	40.0%	UPL
2. <u>Cynodon dactylon</u>	20 <input checked="" type="checkbox"/>	20.0%	FACU
3. <u>Dichanthium aristatum</u>	15 <input type="checkbox"/>	15.0%	FACU
4. <u>Andropogon gerardii</u>	15 <input type="checkbox"/>	15.0%	FAC
5. <u>Medicago lupulina</u>	5 <input type="checkbox"/>	5.0%	UPL
6. <u>Geranium carolinianum</u>	5 <input type="checkbox"/>	5.0%	UPL
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
9. _____	0 <input type="checkbox"/>	0.0%	_____
10. _____	0 <input type="checkbox"/>	0.0%	_____
11. _____	0 <input type="checkbox"/>	0.0%	_____
12. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 50 20% of Total Cover: 20	100	= Total Cover	
Woody Vine Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 15 x 3 = 45

FACU species 45 x 4 = 180

UPL species 53 x 5 = 265

Column Totals: 2 (A) 8 (B)

Prevalence Index = B/A = 4,000

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1035

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 4	10YR	2/1	100				Sandy Clay Loam	gravel mixed in

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: gravel
 Depth (inches): 4

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/6/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1036
Investigator(s): B. Bringham & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Concave **Slope:** 1 % 0.6 °
Subregion (LRR): LRR T **Lat:** 27.933086 **Long:** -97.268679 **Datum:** NAD 83
Soil Map Unit Name: Calallen sandy clay loam, 0 to 1 percent slopes (Os) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Hydrophytic vegetation and hydric soil are not present. This is not a wetland.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (Minimum of one required; check all that apply)</u>		<u>Secondary Indicators (Minimum of 2 required)</u>	
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
Field Observations: Surface Water Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>1</u> Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>0</u>		Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1036**

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Herb Stratum (Plot Size : 30)			
1. <u>Cynodon dactylon</u>	70 <input checked="" type="checkbox"/>	70.0%	FACU
2. <u>Eleocharis montevidensis</u>	20 <input checked="" type="checkbox"/>	20.0%	FACW
3. <u>Cyperus virens</u>	5 <input type="checkbox"/>	5.0%	FACW
4. <u>Sesbania exaltata</u>	3 <input type="checkbox"/>	3.0%	FACW
5. <u>Marsilea vestita</u>	2 <input type="checkbox"/>	2.0%	OBL
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
9. _____	0 <input type="checkbox"/>	0.0%	_____
10. _____	0 <input type="checkbox"/>	0.0%	_____
11. _____	0 <input type="checkbox"/>	0.0%	_____
12. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 50 20% of Total Cover: 20	100	= Total Cover	
Woody Vine Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 4 (B)

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	<u>2</u>	x 1 = <u>2</u>
FACW species	<u>28</u>	x 2 = <u>56</u>
FAC species	<u>0</u>	x 3 = <u>0</u>
FACU species	<u>70</u>	x 4 = <u>280</u>
UPL species	<u>0</u>	x 5 = <u>0</u>
Column Totals:	<u>113</u> (A)	<u>490</u> (B)

Prevalence Index = B/A = 4.336

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1036

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	3/1	100				Silty Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/6/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1037
Investigator(s): B. Bringhurst & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Concave **Slope:** 1 % 0.6 °
Subregion (LRR): LRR T **Lat:** 27.930903 **Long:** -97.268225 **Datum:** NAD 83
Soil Map Unit Name: Papalote fine sandy loam, 0 to 1 percent slopes (PaA) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Hydric soil is not present. This is not a wetland.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (Minimum of one required; check all that apply)</u>		<u>Secondary Indicators (Minimum of 2 required)</u>	
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
Field Observations: Surface Water Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>1</u> Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>0</u>		Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1037**

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Herb Stratum (Plot Size : 30)			
1. <u>Andropogon aeerardii</u>	35 <input checked="" type="checkbox"/>	35.0%	FAC
2. <u>Chloracantha spinosa</u>	35 <input checked="" type="checkbox"/>	35.0%	FACW
3. <u>Eleocharis montevidensis</u>	20 <input checked="" type="checkbox"/>	20.0%	FACW
4. <u>Sesbania exaltata</u>	5 <input type="checkbox"/>	5.0%	FACW
5. <u>Eleocharis minima</u>	5 <input type="checkbox"/>	5.0%	OBL
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
9. _____	0 <input type="checkbox"/>	0.0%	_____
10. _____	0 <input type="checkbox"/>	0.0%	_____
11. _____	0 <input type="checkbox"/>	0.0%	_____
12. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 50 20% of Total Cover: 20	100	= Total Cover	
Woody Vine Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, ro FAC: 1 (A)

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

Percent of Dominant Species That are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>5</u>	x 1 =	<u>5</u>
FACW species <u>60</u>	x 2 =	<u>120</u>
FAC species <u>35</u>	x 3 =	<u>105</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>100</u>	(A)	<u>338</u> (B)

Prevalence Index = B/A = 3.380

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1037

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Location ²		
0 - 16	10YR	3/1	100				Silty Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/6/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1038
Investigator(s): B. Bringham & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Flat **Slope:** 1 % 0.6 °
Subregion (LRR): LRR T **Lat:** 27.93097 **Long:** -97.266017 **Datum:** NAD 83
Soil Map Unit Name: Raymondville clay loam, 0 to 1 percent slopes (RaA) **NWI Classification:** PUBFx

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
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Remarks:
Hydrophytic vegetation, hydric soil, and wetland hydrology are not present. This is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:	
<u>Primary Indicators (Minimum of one required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (Minimum of 2 required)</u> <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)

Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>
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Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: UPP1038

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : <u>30</u>)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>	<u>0</u>	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : <u>30</u>)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>	<u>0</u>	= Total Cover	
Shrub Stratum (Plot Size : <u>30</u>)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>	<u>0</u>	= Total Cover	
Herb Stratum (Plot Size : <u>30</u>)			
1. <u>Amaranthus retroflexus</u>	<u>20</u> <input checked="" type="checkbox"/>	<u>36.4%</u>	<u>FAC</u>
2. <u>Sorghum halepense</u>	<u>10</u> <input checked="" type="checkbox"/>	<u>18.2%</u>	<u>FACU</u>
3. <u>Cynodon dactylon</u>	<u>10</u> <input checked="" type="checkbox"/>	<u>18.2%</u>	<u>FACU</u>
4. <u>Rumex crispus</u>	<u>10</u> <input checked="" type="checkbox"/>	<u>18.2%</u>	<u>FAC</u>
5. <u>Taraxacum officinale</u>	<u>5</u> <input type="checkbox"/>	<u>9.1%</u>	<u>FACU</u>
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
9. _____	0 <input type="checkbox"/>	0.0%	_____
10. _____	0 <input type="checkbox"/>	0.0%	_____
11. _____	0 <input type="checkbox"/>	0.0%	_____
12. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: <u>28</u> 20% of Total Cover: <u>11</u>	<u>55</u>	= Total Cover	
Woody Vine Stratum (Plot Size : <u>30</u>)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>	<u>0</u>	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 30 x 3 = 90

FACU species 25 x 4 = 100

UPL species 0 x 5 = 0

Column Totals: 55 (A) 190 (B)

Prevalence Index = B/A = 3.455

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1038

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	4/1	100				Silty Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
 - Thin Dark Surface (S9) (LRR S, T, U)
 - Loamy Mucky Mineral (F1) (LRR O)
 - Loamy Gleyed Matrix (F2)
 - Depleted Matrix (F3)
 - Redox Dark Surface (F6)
 - Depleted Dark Surface (F7)
 - Redox Depressions (F8)
 - Marl (F10) (LRR U)
 - Depleted Ochric (F11) (MLRA 151)
 - Iron-Manganese Masses (F12) (LRR O, P, T)
 - Umbric Surface (F13) (LRR P, T, U)
 - Delta Ochric (F17) (MLRA 151)
 - Reduced Vertic (F18) (MLRA 150A, 150B)
 - Piedmont Floodplain Soils (F19) (MLRA 149A)
 - Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
 - 2 cm Muck (A10) (LRR S)
 - Reduced Vertic (F18) (outside MLRA 150A,B)
 - Piedmont Floodplain Soils (F19) (LRR P, S, T)
 - Anomalous Bright Loamy Soils (F20) (MLRA 153B)
 - Red Parent Material (TF2)
 - Very Shallow Dark Surface (TF12)
 - Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/6/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1039
Investigator(s): B. Bringham & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Flat **Slope:** 0 % 0.0 °
Subregion (LRR): LRR T **Lat:** 27.931288 **Long:** -97.265593 **Datum:** NAD 83
Soil Map Unit Name: Banquete clay, 0 to 1 percent slopes (Ec) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Hydrophytic vegetation, hydric soil, and wetland hydrology are not present. This is not a wetland.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (Minimum of one required; check all that apply)</u>		<u>Secondary Indicators (Minimum of 2 required)</u>	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____		Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1039**

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Herb Stratum (Plot Size : 30)			
1. <u>Nama hispidum</u>	15 <input checked="" type="checkbox"/>	50.0%	UPL
2. <u>Amaranthus retroflexus</u>	5 <input type="checkbox"/>	16.7%	FAC
3. <u>Taraxacum officinale</u>	5 <input type="checkbox"/>	16.7%	FACU
4. <u>Medicago lupulina</u>	5 <input type="checkbox"/>	16.7%	UPL
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
9. _____	0 <input type="checkbox"/>	0.0%	_____
10. _____	0 <input type="checkbox"/>	0.0%	_____
11. _____	0 <input type="checkbox"/>	0.0%	_____
12. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 15 20% of Total Cover: 6	30	= Total Cover	
Woody Vine Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, ro FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>5</u>	x 3 =	<u>15</u>
FACU species <u>5</u>	x 4 =	<u>20</u>
UPL species <u>20</u>	x 5 =	<u>100</u>
Column Totals: <u>55</u>	(A)	<u>190</u> (B)

Prevalence Index = B/A = 3.455

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1039

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	3/1	100				Silty Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
 ag field

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/6/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1040
Investigator(s): B. Bringhurst & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Flat **Slope:** 0 % 0.0 °
Subregion (LRR): LRR T **Lat:** 27.931337 **Long:** -97.256641 **Datum:** NAD 83
Soil Map Unit Name: Victoria clay 0 to 1 percent slopes (VCA) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
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Remarks:
Hydrophytic vegetation and hydric soil are not present. This is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:	
<u>Primary Indicators (Minimum of one required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (Minimum of 2 required)</u> <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)

Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>2</u> Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>
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Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **UPP1040**

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
6. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	
Herb Stratum (Plot Size : 30)			
1. <u>Nama hispidum</u>	5 <input checked="" type="checkbox"/>	31.3%	UPL
2. <u>Medicago lupulina</u>	3 <input checked="" type="checkbox"/>	18.8%	UPL
3. <u>Taraxacum officinale</u>	2 <input type="checkbox"/>	12.5%	FACU
4. <u>Rumex crispus</u>	2 <input type="checkbox"/>	12.5%	FAC
5. <u>Parthenium hvsterothorus</u>	2 <input type="checkbox"/>	12.5%	FAC
6. <u>Oenothera spœciosa</u>	2 <input type="checkbox"/>	12.5%	UPL
7. _____	0 <input type="checkbox"/>	0.0%	_____
8. _____	0 <input type="checkbox"/>	0.0%	_____
9. _____	0 <input type="checkbox"/>	0.0%	_____
10. _____	0 <input type="checkbox"/>	0.0%	_____
11. _____	0 <input type="checkbox"/>	0.0%	_____
12. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 8 20% of Total Cover: 3.2	16	= Total Cover	
Woody Vine Stratum (Plot Size : 30)			
1. _____	0 <input type="checkbox"/>	0.0%	_____
2. _____	0 <input type="checkbox"/>	0.0%	_____
3. _____	0 <input type="checkbox"/>	0.0%	_____
4. _____	0 <input type="checkbox"/>	0.0%	_____
5. _____	0 <input type="checkbox"/>	0.0%	_____
50% of Total Cover: 0 20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, ro FAC: 0 (A)

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

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

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 4 x 3 = 12

FACU species 2 x 4 = 8

UPL species 10 x 5 = 50

Colum Totals: 30 (A) 135 (B)

Prevalence Index = B/A = 4,500

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definition of Vegetation Strata:

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

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present ? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: UPP1040

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Tvpe ¹	Location ²		
0 - 16	10YR	3/1	100				Silty Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Muck Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

Indicators for Problematic Hydric Soils³:

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
 ag field

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bluewater Terminal SPM Project **City/County:** San Patricio **Sampling Date:** 2/6/2019
Applicant/Owner: Phillips 66 Pipeline, LLC **State:** TX **Sampling Point:** UPP1041
Investigator(s): B. Bringhurst & A. Ostrowski **Section, Township, Range:** S N/A T N/A R N/A
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Flat **Slope:** 0 % 0.0 °
Subregion (LRR): LRR T **Lat:** 27.930119 **Long:** -97.248539 **Datum:** NAD 83
Soil Map Unit Name: Victoria clay, depressional (Vd) **NWI Classification:** None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Hydrophytic vegetation and hydric soil are not present. This is not a wetland.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (Minimum of one required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<u>Secondary Indicators (Minimum of 2 required)</u> <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>0</u>	Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:		
Remarks:		