

## **Appendix E**

### **Wetland Delineation Forms and Photos**

**WETLAND DETERMINATION DATA FORM - Arid West Region**

Project/Site: Phillips 66 Port Costa - TXI/PCM Site City/County: Contra Costa Sampling Date: 02.28.2013  
 Applicant/Owner: Phillips 66 State: CA Sampling Point: 1  
 Investigator(s): Justin Westrum & Tiffany Yap Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): valley floor Local relief (concave, convex, none): concave Slope (%): 0-2%  
 Subregion (LRR): C - Mediterranean California Lat: 38.036500 Long: -122.175044 Datum: WGS84  
 Soil Map Unit Name: Los Osos Clay Loam 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"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Site is highly disturbed. Delineation target area is settling basin created by previous landowner in 2001; basin receives water from nearby storm drain via a culvert and drains via a second culvert at the downstream end. Delineation conducted during drier than average winter.	

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
3. _____				
4. _____				
Total Cover: _____ %				
<b>Sapling/Shrub Stratum</b>				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
Total Cover: _____ %				
<b>Herb Stratum</b>				
1. <i>Bromus rubens</i>	60	Yes	UPL	
2. <i>Festuca microstachys</i>	20	No	Not Listed	
3. <i>Picris echioides</i>	10	No	Not Listed	
4. <i>Geranium dissectum</i>	10	No	Not Listed	
5. _____				
6. _____				
7. _____				
8. _____				
Total Cover: <b>100%</b>				
<b>Woody Vine Stratum</b>				
1. _____				
2. _____				
Total Cover: _____ %				
% Bare Ground in Herb Stratum _____ %	% Cover of Biotic Crust _____ %			

**Dominance Test worksheet:**

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

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

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

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <input type="text" value="0"/>	x 1 = <input type="text" value="0"/>
FACW species <input type="text" value="0"/>	x 2 = <input type="text" value="0"/>
FAC species <input type="text" value="0"/>	x 3 = <input type="text" value="0"/>
FACU species <input type="text" value="0"/>	x 4 = <input type="text" value="0"/>
UPL species <input type="text" value="100"/>	x 5 = <input type="text" value="500"/>
Column Totals: <input type="text" value="100"/> (A)	<input type="text" value="500"/> (B)
Prevalence Index = B/A = <input type="text" value="5.00"/>	

**Hydrophytic Vegetation Indicators:**

Dominance Test is >50%

Prevalence Index is ≤3.0<sup>1</sup>

Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes  No

Remarks:

**SOIL**

Sampling Point: 1

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

Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-20	7.5YR 3/2	100%					clay loam	fill, w/ gravel

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix.    <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.  
<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

<p><b>Hydic Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b></p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <b>(LRR C)</b> <input type="checkbox"/> 1 cm Muck (A9) <b>(LRR D)</b> <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	<p><b>Indicators for Problematic Hydic Soils:<sup>4</sup></b></p> <input type="checkbox"/> 1 cm Muck (A9) <b>(LRR C)</b> <input type="checkbox"/> 2 cm Muck (A10) <b>(LRR B)</b> <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
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<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

<p><b>Restrictive Layer (if present):</b></p> Type: _____ Depth (inches): _____ Remarks: _____	<p><b>Hydic Soil Present?</b>    Yes <input type="radio"/>    No <input checked="" type="radio"/></p>
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**HYDROLOGY**

<p><b>Wetland Hydrology Indicators:</b></p> <p>Primary Indicators (any one indicator is sufficient)</p> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <b>(Nonriverine)</b> <input type="checkbox"/> Sediment Deposits (B2) <b>(Nonriverine)</b> <input type="checkbox"/> Drift Deposits (B3) <b>(Nonriverine)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <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 Plowed Soils (C6) <input type="checkbox"/> Other (Explain in Remarks)	<p><u>Secondary Indicators (2 or more required)</u></p> <input type="checkbox"/> Water Marks (B1) <b>(Riverine)</b> <input type="checkbox"/> Sediment Deposits (B2) <b>(Riverine)</b> <input type="checkbox"/> Drift Deposits (B3) <b>(Riverine)</b> <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)
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<p><b>Field Observations:</b></p> Surface Water Present?    Yes <input type="radio"/> No <input type="radio"/> Depth (inches): _____ Water Table Present?    Yes <input type="radio"/> No <input type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe)    Yes <input type="radio"/> No <input type="radio"/> Depth (inches): _____	<p><b>Wetland Hydrology Present?</b>    Yes <input type="radio"/>    No <input checked="" type="radio"/></p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**WETLAND DETERMINATION DATA FORM - Arid West Region**

Project/Site: Phillips 66 Port Costa - TXI/PCM Site City/County: Contra Costa Sampling Date: 02.28.2013  
 Applicant/Owner: Phillips 66 State: CA Sampling Point: 2  
 Investigator(s): Justin Westrum & Tiffany Yap Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): valley floor Local relief (concave, convex, none): concave Slope (%): 0-2%  
 Subregion (LRR): C - Mediterranean California Lat: 38.036487 Long: -122.175026 Datum: WGS84  
 Soil Map Unit Name: Los Osos Clay Loam 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 type="radio"/> No <input checked="" type="radio"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Site is highly disturbed. Delineation target area is settling basin created by previous landowner in 2001; basin receives water from nearby storm drain via a culvert and drains via a second culvert at the downstream end. Delineation conducted during drier than average winter.	

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status																																	
1. <i>Salix lasiolepis</i>	15	No	FACW	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0 %</u> (A/B)																																
2. _____																																				
3. _____																																				
4. _____																																				
Total Cover: <u>15 %</u>				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td align="center" colspan="2">Total % Cover of:</td> <td align="center" colspan="2">Multiply by:</td> </tr> <tr> <td>OBL species</td> <td align="center"><u>  </u></td> <td>x 1 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>FACW species</td> <td align="center"><u>70</u></td> <td>x 2 =</td> <td align="center"><u>140</u></td> </tr> <tr> <td>FAC species</td> <td align="center"><u>20</u></td> <td>x 3 =</td> <td align="center"><u>60</u></td> </tr> <tr> <td>FACU species</td> <td align="center"><u>  </u></td> <td>x 4 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>UPL species</td> <td align="center"><u>  </u></td> <td>x 5 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>Column Totals:</td> <td align="center"><u>90</u></td> <td>(A)</td> <td align="center"><u>200</u> (B)</td> </tr> <tr> <td align="center" colspan="4">Prevalence Index = B/A = <u>2.22</u></td> </tr> </table>	Total % Cover of:		Multiply by:		OBL species	<u>  </u>	x 1 =	<u>0</u>	FACW species	<u>70</u>	x 2 =	<u>140</u>	FAC species	<u>20</u>	x 3 =	<u>60</u>	FACU species	<u>  </u>	x 4 =	<u>0</u>	UPL species	<u>  </u>	x 5 =	<u>0</u>	Column Totals:	<u>90</u>	(A)	<u>200</u> (B)	Prevalence Index = B/A = <u>2.22</u>			
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1. _____																																				
2. _____																																				
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4. _____																																				
5. _____																																				
Total Cover: <u>  </u> %																																				
<b>Herb Stratum</b>																																				
1. <i>Xanthium strumarium</i>	55	Yes	FACW	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.																																
2. <i>Rumex crispus</i>	20	No	FAC																																	
3. _____																																				
4. _____																																				
5. _____																																				
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1. _____																																				
2. _____																																				
Total Cover: <u>  </u> %																																				
% Bare Ground in Herb Stratum <u>5 %</u>		% Cover of Biotic Crust <u>  </u> %																																		

Remarks:

**SOIL**

Sampling Point: 2

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

Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-20	7.5YR 3/2	100%					clay loam	fill

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix.    <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.  
<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

<p><b>Hydic Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b></p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	<p><b>Indicators for Problematic Hydic Soils:<sup>4</sup></b></p> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
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<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Remarks: \_\_\_\_\_

**Hydic Soil Present?**    Yes     No

**HYDROLOGY**

<p><b>Wetland Hydrology Indicators:</b></p> <p>Primary Indicators (any one indicator is sufficient)</p> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <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 Plowed Soils (C6) <input type="checkbox"/> Other (Explain in Remarks)	<p><b>Secondary Indicators (2 or more required)</b></p> <input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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**Field Observations:**

Surface Water Present?    Yes     No     Depth (inches): \_\_\_\_\_

Water Table Present?    Yes     No     Depth (inches): \_\_\_\_\_

Saturation Present? (includes capillary fringe)    Yes     No     Depth (inches): \_\_\_\_\_

**Wetland Hydrology Present?**    Yes     No

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

Remarks:

**WETLAND DETERMINATION DATA FORM - Arid West Region**

Project/Site: Phillips 66 Port Costa - TXI/PCM Site City/County: Contra Costa Sampling Date: 02.28.2013  
 Applicant/Owner: Phillips 66 State: CA Sampling Point: 3  
 Investigator(s): Justin Westrum & Tiffany Yap Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): valley floor Local relief (concave, convex, none): concave Slope (%): 0-2%  
 Subregion (LRR): C - Mediterranean California Lat: 38.036472 Long: -122.175021 Datum: WGS84  
 Soil Map Unit Name: Los Osos Clay Loam 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"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Site is highly disturbed. Delineation target area is settling basin created by previous landowner in 2001; basin receives water from nearby storm drain via a culvert and drains via a second culvert at the downstream end. Delineation conducted during drier than average winter.	

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status																																	
1. <i>Salix lasiolepis</i>	80	Yes	FACW	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0 %</u> (A/B)																																
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<b>Sapling/Shrub Stratum</b>				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td align="center" colspan="2">Total % Cover of:</td> <td align="center" colspan="2">Multiply by:</td> </tr> <tr> <td>OBL species</td> <td align="center"><u>  </u></td> <td align="center">x 1 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>FACW species</td> <td align="center"><u>95</u></td> <td align="center">x 2 =</td> <td align="center"><u>190</u></td> </tr> <tr> <td>FAC species</td> <td align="center"><u>5</u></td> <td align="center">x 3 =</td> <td align="center"><u>15</u></td> </tr> <tr> <td>FACU species</td> <td align="center"><u>  </u></td> <td align="center">x 4 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>UPL species</td> <td align="center"><u>  </u></td> <td align="center">x 5 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>Column Totals:</td> <td align="center"><u>100</u></td> <td align="center">(A)</td> <td align="center"><u>205</u> (B)</td> </tr> <tr> <td align="center" colspan="4">Prevalence Index = B/A = <u>2.05</u></td> </tr> </table>	Total % Cover of:		Multiply by:		OBL species	<u>  </u>	x 1 =	<u>0</u>	FACW species	<u>95</u>	x 2 =	<u>190</u>	FAC species	<u>5</u>	x 3 =	<u>15</u>	FACU species	<u>  </u>	x 4 =	<u>0</u>	UPL species	<u>  </u>	x 5 =	<u>0</u>	Column Totals:	<u>100</u>	(A)	<u>205</u> (B)	Prevalence Index = B/A = <u>2.05</u>			
Total % Cover of:		Multiply by:																																		
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Total Cover: <u>  </u> %																																				
<b>Herb Stratum</b>				<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.																																
1. <i>Xanthium strumarium</i>	10	No	FACW																																	
2. <i>Rumex crispus</i>	5	No	FAC																																	
3. <i>Cyperus eragrostis</i>	5	No	FACW																																	
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2.																																				
Total Cover: <u>  </u> %																																				
% Bare Ground in Herb Stratum <u>80 %</u>		% Cover of Biotic Crust <u>  </u> %																																		

Remarks:

**SOIL**

Sampling Point: 3

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

Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-20	10YR 4/3	100%					clay loam	fill

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix.    <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.  
<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

<p><b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b></p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	<p><b>Indicators for Problematic Hydric Soils:<sup>4</sup></b></p> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
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<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Remarks: \_\_\_\_\_

**Hydric Soil Present?** Yes  No

**HYDROLOGY**

<p><b>Wetland Hydrology Indicators:</b></p> <p>Primary Indicators (any one indicator is sufficient)</p> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input checked="" type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <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 Plowed Soils (C6) <input type="checkbox"/> Other (Explain in Remarks)	<p><u>Secondary Indicators (2 or more required)</u></p> <input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_

Saturation Present? (includes capillary fringe) Yes  No  Depth (inches): \_\_\_\_\_

**Wetland Hydrology Present?** Yes  No

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

Remarks:

**WETLAND DETERMINATION DATA FORM - Arid West Region**

Project/Site: Phillips 66 Port Costa - TXI/PCM Site City/County: Contra Costa Sampling Date: 02.28.2013  
 Applicant/Owner: Phillips 66 State: CA Sampling Point: 4  
 Investigator(s): Justin Westrum & Tiffany Yap Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): valley floor Local relief (concave, convex, none): concave Slope (%): 0-2%  
 Subregion (LRR): C - Mediterranean California Lat: 38.036457 Long: -122.175026 Datum: WGS84  
 Soil Map Unit Name: Los Osos Clay Loam 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 checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks: Site is highly disturbed. Delineation target area is settling basin created by previous landowner in 2001; basin receives water from nearby storm drain via a culvert and drains via a second culvert at the downstream end. Delineation conducted during drier than average winter.	

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status																																	
1. <i>Salix lasiolepis</i>	90	Yes	FACW	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0 %</u> (A/B)																																
2. _____																																				
3. _____																																				
4. _____																																				
Total Cover: <u>90 %</u>																																				
Sapling/Shrub Stratum				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td align="center" colspan="2">Total % Cover of:</td> <td align="center" colspan="2">Multiply by:</td> </tr> <tr> <td>OBL species</td> <td align="center"><u>  </u></td> <td align="center">x 1 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>FACW species</td> <td align="center"><u>90</u></td> <td align="center">x 2 =</td> <td align="center"><u>180</u></td> </tr> <tr> <td>FAC species</td> <td align="center"><u>  </u></td> <td align="center">x 3 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>FACU species</td> <td align="center"><u>  </u></td> <td align="center">x 4 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>UPL species</td> <td align="center"><u>  </u></td> <td align="center">x 5 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>Column Totals:</td> <td align="center"><u>90</u></td> <td align="center">(A)</td> <td align="center"><u>180</u> (B)</td> </tr> <tr> <td align="center" colspan="4">Prevalence Index = B/A = <u>2.00</u></td> </tr> </table>	Total % Cover of:		Multiply by:		OBL species	<u>  </u>	x 1 =	<u>0</u>	FACW species	<u>90</u>	x 2 =	<u>180</u>	FAC species	<u>  </u>	x 3 =	<u>0</u>	FACU species	<u>  </u>	x 4 =	<u>0</u>	UPL species	<u>  </u>	x 5 =	<u>0</u>	Column Totals:	<u>90</u>	(A)	<u>180</u> (B)	Prevalence Index = B/A = <u>2.00</u>			
Total % Cover of:		Multiply by:																																		
OBL species	<u>  </u>	x 1 =	<u>0</u>																																	
FACW species	<u>90</u>	x 2 =	<u>180</u>																																	
FAC species	<u>  </u>	x 3 =	<u>0</u>																																	
FACU species	<u>  </u>	x 4 =	<u>0</u>																																	
UPL species	<u>  </u>	x 5 =	<u>0</u>																																	
Column Totals:	<u>90</u>	(A)	<u>180</u> (B)																																	
Prevalence Index = B/A = <u>2.00</u>																																				
1. _____																																				
2. _____																																				
3. _____																																				
4. _____																																				
5. _____																																				
Total Cover: <u>  </u> %																																				
Herb Stratum				<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.																																
1. _____																																				
2. _____																																				
3. _____																																				
4. _____																																				
5. _____																																				
6. _____																																				
7. _____																																				
8. _____																																				
Total Cover: <u>  </u> %																																				
Woody Vine Stratum				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>																																
1. _____																																				
2. _____																																				
Total Cover: <u>  </u> %																																				
% Bare Ground in Herb Stratum <u>100%</u>		% Cover of Biotic Crust <u>  </u> %																																		

Remarks:

**SOIL**

Sampling Point: 4

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

Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	2.5Y 3/2	100%					clay loam	fill
16+	N/A						N/A	layer of bricks (fill)

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix.    <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.  
<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input checked="" type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	<b>Indicators for Problematic Hydric Soils:<sup>4</sup></b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
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<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____ Remarks: _____	<b>Hydric Soil Present?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>
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**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <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 Plowed Soils (C6) <input type="checkbox"/> Other (Explain in Remarks)	<b>Secondary Indicators (2 or more required)</b> <input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)
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<b>Field Observations:</b> 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>7</u> Saturation Present? (includes capillary fringe)    Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>0</u>	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**Photographs:**

**Photo #: 01** | **Description:** North end of sediment basin.



**Photo #: 02** | **Description:** South end of sediment basin.



**Photo #: 03** | **Description:** Drain at north end of sediment basin.



**Photo #: 04** | **Description:** Storm drain at end of concrete v-ditch along roadway (drains to basin).



**Photo #:**05 **Description:** Sampling Point 1.



**Photo #:** 06 **Description:** Sampling Point 2.



**Photo #: 07** | **Description:** Sampling Point 3.



**Photo #: 08** | **Description:** Sampling Point 4.

