

ATTACHMENT 1
WETLANDS DELINEATION FIELD DATA FORMS

Please Note: At the time the wetland delineation was conducted, the applicant/owner was the Contra Costa Water District. The project applicant/ownership has since transferred to the San Luis & Delta-Mendota Water Authority.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 Gates- Old River City/County: San Joaquin, Bacon Bl Sampling Date: 1/8/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 1A
 Investigator(s): T. Mahony, A. Pichay Section, Township, Range: T2N, R4E, sec 30
 Landform (hillslope, terrace, etc.): ditch Local relief (concave, convex, none): concave Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 37° 58' 59" Long: 121° 34' 46" Datum: NAD83
 Soil Map Unit Name: Rhyde Clay Loam, 0-2% slopes NWI classification: _____
 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 type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/> No <input type="radio"/>	
Wetland Hydrology Present?	Yes <input type="radio"/> No <input type="radio"/>	
Remarks: <u>Drainage ditch alongside Sunflower field. Between field & levee.</u>		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> % (A/B) Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> <th></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td>x 1 =</td> <td>0</td> </tr> <tr> <td>FACW species</td> <td>x 2 =</td> <td>0</td> </tr> <tr> <td>FAC species</td> <td>x 3 =</td> <td>0</td> </tr> <tr> <td>FACU species</td> <td>x 4 =</td> <td>0</td> </tr> <tr> <td>UPL species</td> <td>x 5 =</td> <td>0</td> </tr> <tr> <td>Column Totals:</td> <td>(A)</td> <td>0 (B)</td> </tr> </tbody> </table> Prevalence Index = B/A = _____	Total % Cover of:	Multiply by:		OBL species	x 1 =	0	FACW species	x 2 =	0	FAC species	x 3 =	0	FACU species	x 4 =	0	UPL species	x 5 =	0	Column Totals:	(A)	0 (B)
Total % Cover of:	Multiply by:																								
OBL species	x 1 =	0																							
FACW species	x 2 =	0																							
FAC species	x 3 =	0																							
FACU species	x 4 =	0																							
UPL species	x 5 =	0																							
Column Totals:	(A)	0 (B)																							
1. _____																									
2. _____																									
3. _____																									
4. _____																									
Total Cover: _____ %																									
Sapling/Shrub Stratum				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present. Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="radio"/>																					
1. _____																									
2. _____																									
3. _____																									
4. _____																									
5. _____																									
Total Cover: _____ %																									
Herb Stratum																									
1. <u>Typha latifolia</u>	<u>20</u>	<u>y</u>	<u>OBL</u>																						
2. <u>Scheuchzeria palustris</u>	<u>20</u>	<u>y</u>	<u>OBL</u>																						
3. <u>unk grass = Polypogon australis</u>	<u>40</u>	<u>y</u>	<u>FACW+</u>																						
4. <u>Polygonum amphibium</u>	<u>10</u>		<u>OBL</u>																						
5. <u>Lemna sp.</u>	<u>10</u>		<u>OBL</u>																						
6. _____																									
7. _____																									
8. _____																									
Total Cover: _____ %																									
Woody Vine Stratum																									
1. _____																									
2. _____																									
Total Cover: _____ %																									
% Bare Ground in Herb Stratum _____ %	% Cover of Biotic Crust _____ %																								

Remarks:

SOIL

Sampling Point: 1A

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

Depth (inches)	Matrix		Redox Features				Texture ³	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR 2/1	90	10YR 5/6	100	C	M	clay loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☒ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils⁴:

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
☐ High Water Table (A2)
☒ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☒ Surface Soil Cracks (B6)
☒ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☒ Hydrogen Sulfide Odor (C1)
☒ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Plowed Soils (C6)
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☒ No ☐Depth (inches): 12Water Table Present? Yes ☐ No ☐

Depth (inches): _____

Saturation Present? Yes ☐ No ☐

(includes capillary fringe)

Depth (inches): _____

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

very wet ditch w/ very steep sides

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 gates - Old River City/County: Bacon Isl, S. Joaq. Sampling Date: 8/1/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 1B
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N, R4E, Sec 30
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): slight concave Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 37° 58' 59" Long: 121° 34' 46" Datum:
 Soil Map Unit Name: Ryde Clay Loam, 0-2% slopes NWI classification:

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.) assuming yearly disking

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Remarks: <u>This point has been disked this year. Probably receives regular disking yearly.</u>			

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>01</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> % (A/B)
1. <u></u>				
2. <u></u>				
3. <u></u>				
4. <u></u>				
5. <u></u>				
Total Cover: <u>60</u> %				Hydrophytic Vegetation Indicators: Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
Sapling/Shrub Stratum				
1. <u></u>				
2. <u></u>				
3. <u></u>				
Total Cover: <u>0</u> %				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Herb Stratum				
1. <u>Cynodon dactylon</u>	<u>60</u>	<u>y</u>	<u>FAC</u>	
2. <u>Urtica dioica</u>	<u>T</u>	<u>n</u>	<u>FACW</u>	
3. <u></u>				
Total Cover: <u>0</u> %				Remarks: <u>An area of mounded, dead Typha ~6m from ditch appears to be spoils from dredging of the drainage ditch.</u>
Woody Vine Stratum				
1. <u></u>				
2. <u></u>				
Total Cover: <u>0</u> %				
% Bare Ground in Herb Stratum <u>40</u> %		% Cover of Biotic Crust <u>0</u> %		

SOIL

Sampling Point: 1B

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture ³	Remarks
	Color (moist)	%	Color (moist)	%				
0-16	10YR 3/2	99+	10YR 5/6	<1	C	M	clay loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:⁴

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

occasional redox features.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Plowed Soils (C6)
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

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:

No hydrology indicators present.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 gates, Old River City/County: Bacon Isl. Sampling Date: 8/1/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 2A
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N, R4E, sec 30
 Landform (hillslope, terrace, etc.): Flat ag. field Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 37° 59' 1.6" Long: 121° 34' 45.6" Datum: NAD 83
 Soil Map Unit Name: Ryde clay loam, 0-2% slopes NWI classification:

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.) → w/ ag. dist.

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

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

Remarks: Agricultural field alongside drainage ditch, east side.
Furrowed soils in a sunflower field. Field soils are furrowed.
Drainage ditch does not appear to be connected N of Road
to additional ditch described in points 3-5.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1.				Number of Dominant Species That Are OBL, FACW, or FAC: <u>01</u> (A)
2.				Total Number of Dominant Species Across All Strata: <u>01</u> (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> % (A/B)
4.				
Total Cover: %				
Sampling/Shrub Stratum				Prevalence Index worksheet:
1.				Total % Cover of: Multiply by:
2.				OBL species x 1 = <u>0</u>
3.				FACW species x 2 = <u>0</u>
4.				FAC species x 3 = <u>0</u>
5.				FACU species x 4 = <u>0</u>
Total Cover: %				UPL species x 5 = <u>0</u>
				Column Totals: (A) <u>0</u> (B) <u>0</u>
Herb Stratum				Prevalence Index = B/A =
1. <u>Xanthium strumarium</u>	<u>70</u>	<u>Y</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. <u>Polygonum amphibium</u>	<u>10</u>		<u>OBL</u>	
3. <u>cultivated sunflower</u>	<u>T</u>		<u>FAC</u>	
4. <u>Helianthus annuus</u>				
5.				
6.				
7.				
8.				
Total Cover: %				
Woody Vine Stratum				
1.				
2.				
Total Cover: %				
% Bare Ground in Herb Stratum <u>10</u> % % Cover of Biotic Crust %				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Remarks: Very clear vegetation break between points, where sunflower becomes a dominant in point 2B.

Sampling Point: 2A

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils:

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

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) |
| <input checked="" type="checkbox"/> Saturation (A3) <i>in places</i> | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☐ Depth (inches):

Water Table Present? Yes ☐ No ☐ Depth (inches):

Saturation Present? Yes ☒ No ☐ Depth (inches): 0-4

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

marks: Saturation occurs closer to the channel. There is a gradient to drier conditions eastward.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 gates, Old River City/County: Bacon Isl. Sampling Date: 5/1/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 2B
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N, R4E, sec 30
 Landform (hillslope, terrace, etc.): farmed field Local relief (concave, convex, none): None Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 37° 59' 1.6" Long: 121° 34' 45.6" Datum: NAD 83
 Soil Map Unit Name: Ryoe clay loam, 0-2% slopes NWI classification: _____

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 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 type="radio"/>	
Wetland Hydrology Present?	Yes <input type="radio"/> No <input type="radio"/>	
Remarks: <u>Cropland, cultivated with sunflower.</u>		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> % (A/B) Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> <th></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td>x 1 =</td> <td><u>0</u></td> </tr> <tr> <td>FACW species</td> <td>x 2 =</td> <td><u>0</u></td> </tr> <tr> <td>FAC species</td> <td>x 3 =</td> <td><u>0</u></td> </tr> <tr> <td>FACU species</td> <td>x 4 =</td> <td><u>0</u></td> </tr> <tr> <td>UPL species</td> <td>x 5 =</td> <td><u>0</u></td> </tr> <tr> <td>Column Totals:</td> <td>(A)</td> <td><u>0</u> (B)</td> </tr> </tbody> </table> Prevalence Index = B/A = _____	Total % Cover of:	Multiply by:		OBL species	x 1 =	<u>0</u>	FACW species	x 2 =	<u>0</u>	FAC species	x 3 =	<u>0</u>	FACU species	x 4 =	<u>0</u>	UPL species	x 5 =	<u>0</u>	Column Totals:	(A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																								
OBL species	x 1 =	<u>0</u>																							
FACW species	x 2 =	<u>0</u>																							
FAC species	x 3 =	<u>0</u>																							
FACU species	x 4 =	<u>0</u>																							
UPL species	x 5 =	<u>0</u>																							
Column Totals:	(A)	<u>0</u> (B)																							
1. _____																									
2. _____																									
3. _____																									
4. _____																									
Total Cover: _____ %																									
Sapling/Shrub Stratum																									
1. _____																									
2. _____																									
3. _____																									
4. _____																									
5. _____																									
Total Cover: _____ %																									
Herb Stratum																									
1. <u>Sunflower (cultivated) Helianthus annuus</u>	<u>90</u>	<u>y</u>	<u>FAC-</u>																						
2. <u>Xanthium strumarium</u>	<u>10</u>		<u>FAC+</u>																						
3. _____																									
4. _____																									
5. _____																									
6. _____																									
7. _____																									
8. _____																									
Total Cover: _____ %																									
Woody Vine Stratum																									
1. _____																									
2. _____																									
Total Cover: _____ %																									
% Bare Ground in Herb Stratum <u>0</u> %	% Cover of Biotic Crust _____ %																								
Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.																									
Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/>																									
Remarks:																									

Sampling Point: 2B

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils:

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

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☐ No ☐ Depth (inches):

Saturation Present? Yes ☐ No ☐ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

Saturation not present.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 gates, Old River City/County: Bacon Isl, San Joaquin Sampling Date: 8/1/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 3A
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: 72N, R4E, sec 30
 Landform (hillslope, terrace, etc.): low Local relief (concave, convex, none): concave Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 37° 59' 14.2" Long: 121° 34' 43" Datum: NAD83
 Soil Map Unit Name: Rydz clay loam, 0-2% slopes NWI classification:

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"/>	Is the Sampled Area within a Wetland? 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"/>	

Remarks: entire area has been disked, likely receives regular diskimg. There also appears to be some dumped dredge spoils in areas. point is located on W side of ditch, between ditch & levee

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u> </u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>01</u> (A)
2. <u> </u>				Total Number of Dominant Species Across All Strata: <u>01</u> (B)
3. <u> </u>				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> % (A/B)
4. <u> </u>				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species x 1 = <u>0</u> FACW species x 2 = <u>0</u> FAC species x 3 = <u>0</u> FACU species x 4 = <u>0</u> UPL species x 5 = <u>0</u> Column Totals: (A) <u>0</u> (B) <u>0</u> Prevalence Index = B/A = <u> </u>
Total Cover: <u> </u> %				
Sapling/Shrub Stratum				
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
4. <u> </u>				
5. <u> </u>				
6. <u> </u>				
7. <u> </u>				
8. <u> </u>				Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>
Total Cover: <u> </u> %				
Herb Stratum				Remarks:
1. <u>Polygonum amphibium</u>	<u>60</u>	<u>y</u>	<u>OBL</u>	
2. <u> </u>				% Bare Ground in Herb Stratum <u>40</u> % % Cover of Biotic Crust <u> </u> %
3. <u> </u>				
4. <u> </u>				Total Cover: <u> </u> %
5. <u> </u>				
6. <u> </u>				Woody Vine Stratum
7. <u> </u>				
8. <u> </u>				Total Cover: <u> </u> %
1. <u> </u>				
2. <u> </u>				Total Cover: <u> </u> %
3. <u> </u>				

SOIL

Sampling Point: 3A

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture ³	Remarks
	Color (moist)	%	Color (moist)	%				
0-16	10YR2/1	95	10YR5/6	5	C	m	clay loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input checked="" type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Vernal Pools (F9) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils:⁴

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

 Type:
 Depth (inches):
Hydric Soil Present? Yes ☒ No ☐Remarks: Redox features difficult to distinguish due to very dark matrix

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches): <u>2</u>
Water Table Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches): <u>0</u>
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches): <u>0</u>

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks: Ponded area is probably per

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 Gates, Old River City/County: Bacon Island Sampling Date: 8/1/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 3B
 Investigator(s): T. Mahoney, A. Richy Section, Township, Range: T2N, R4E, sec 30
 Landform (hillslope, terrace, etc.): slight hill Local relief (concave, convex, none): slight convex Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 37° 59' 14.2" Long: 121° 34' 43" Datum: NAD83
 Soil Map Unit Name: Ryoe clay loam, 0-2% NWI classification: _____

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: <u>Heavy disking disturbance evident.</u>		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC:	<u>01</u> (A)
2. _____				Total Number of Dominant Species Across All Strata:	<u>20</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>50</u> % (A/B)
4. _____				Prevalence Index worksheet:	
Total Cover: _____ %				Total % Cover of:	Multiply by:
Sapling/Shrub Stratum				OBL species	x 1 = <u>0</u>
1. _____				FACW species	x 2 = <u>0</u>
2. _____				FAC species	<u>15</u> x 3 = <u>450</u>
3. _____				FACU species	x 4 = <u>0</u>
4. _____				UPL species	<u>80</u> x 5 = <u>400</u>
5. _____				Column Totals:	<u>95</u> (A) <u>4450</u> (B)
Total Cover: _____ %				Prevalence Index = B/A = <u>4.68</u>	
Herb Stratum				Hydrophytic Vegetation Indicators:	
1. <u>Cynodon dactylon</u>	<u>15</u>	<u>y</u>	<u>FAC</u>	<input checked="" type="checkbox"/> Dominance Test is >50%	
2. <u>Raphanus sativa</u>	<u>thatch</u>	<u>y</u>	<u>NL</u>	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹	
3. <u>Polygonum amphibium</u>	<u>5</u>		<u>OBL</u>	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
4. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
5. _____				¹ Indicators of hydric soil and wetland hydrology must be present.	
6. _____				Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	
7. _____					
8. _____					
Total Cover: _____ %					
Woody Vine Stratum					
1. _____					
2. _____					
Total Cover: _____ %					
% Bare Ground in Herb Stratum <u>40</u> %					
% Cover of Biotic Crust _____ %					

Remarks: Thatch of disked vegetation is ~80% cover.

Sampling Point: 3B

HYDROLOGYUS Army Corps of Engineers

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 gates- old river City/County: Bacon Isl. Sampling Date: 8/1/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 4A
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N, R4E, Sec 30
 Landform (hillslope, terrace, etc.): bowle, slight Local relief (concave, convex, none): concave Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 37° 59' 15" Long: 121° 34' 42" Datum: NAD83
 Soil Map Unit Name: R402 CLAY loam, 0-2% slopes NWI classification: _____

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"/>	Is the Sampled Area within a Wetland?	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"/>		
Remarks: <u>Point located in disked field</u>			

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>✓</u>				Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u> (A)
2.				Total Number of Dominant Species Across All Strata:	<u>10</u> (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100</u> % (A/B)
4.				Prevalence Index worksheet:	
Total Cover: _____ %				Total % Cover of:	Multiply by:
Sapling/Shrub Stratum				OBL species	x 1 = 0
1. <u>✓</u>				FACW species	x 2 = 0
2.				FAC species	x 3 = 0
3.				FACU species	x 4 = 0
4.				UPL species	x 5 = 0
5.				Column Totals:	(A) 0 (B)
Total Cover: _____ %				Prevalence Index = B/A = _____	
Herb Stratum				Hydrophytic Vegetation Indicators:	
1. <u>Polygonum amphibium</u> <u>50</u> <u>y</u> <u>OBL</u>				<input checked="" type="checkbox"/> Dominance Test is >50%	
2.				<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹	
3.				<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
4.				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
5.				¹ Indicators of hydric soil and wetland hydrology must be present.	
6.				Hydrophytic Vegetation Present?	
7.				Yes <input checked="" type="radio"/> No <input type="radio"/>	
8.					
Total Cover: _____ %					
Woody Vine Stratum					
1. <u>✓</u>					
2.					
Total Cover: _____ %					
% Bare Ground in Herb Stratum <u>30</u> %				% Cover of Biotic Crust _____ %	

Remarks: 20% thatch from disking.

Sampling Point: 4A

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils:⁴

- | | |
|--------------------------|-----------------------------------|
| <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) (LRR C) |
| <input type="checkbox"/> | 1 cm Muck (A9) (LRR D) |
| <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) |

- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (Nonriverine)
- ☐ Sediment Deposits (B2) (Nonriverine)
- ☐ Drift Deposits (B3) (Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ 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 checked="" 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) |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

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: 2 gates - Old River City/County: Bacon Isl Sampling Date: 8/1/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 4B
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: 72N, R4E, Sec 30
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none/convex Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 37° 59' 15" Long: 121° 34' 42" Datum: NAD83
 Soil Map Unit Name: _____ NWI classification: _____

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: <u>Located in diked field</u>					

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)		
2. _____				Total Number of Dominant Species Across All Strata: <u>0</u> (B)		
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> % (A/B)		
4. _____						
Total Cover: _____ %						
Sapling/Shrub Stratum				Prevalence Index worksheet:		
1. _____				Total % Cover of: _____ Multiply by:		
2. _____				OBL species	x 1 =	<u>0</u>
3. _____				FACW species	x 2 =	<u>0</u>
4. _____				FAC species	x 3 =	<u>0</u>
5. _____				FACU species	x 4 =	<u>0</u>
Total Cover: _____ %				UPL species	x 5 =	<u>0</u>
				Column Totals:	(A)	<u>0</u> (B)
				Prevalence Index = B/A = _____		
Herb Stratum				Hydrophytic Vegetation Indicators:		
1. <u>grass (see below)</u>	<u>20</u>	<u>y</u>		<input checked="" type="checkbox"/> Dominance Test is >50%		
2. _____				<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹		
3. _____				<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)		
4. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)		
5. _____						
6. _____						
7. _____						
8. _____						
Total Cover: _____ %						
Woody Vine Stratum				¹ Indicators of hydric soil and wetland hydrology must be present.		
1. _____						
2. _____				Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input type="radio"/>		
Total Cover: _____ %						
% Bare Ground in Herb Stratum <u>80</u> % % Cover of Biotic Crust _____ %						
Remarks: <u>dominant invasive - Bromus inermis - no flowers (?) windows in blades, or possibly Festuca arundinacea</u>						

SOIL

Sampling Point: WB

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture ³	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-16	10 YR 2/1	100	—	—	—	loam	

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

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

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/>
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Remarks: No hydric soils indicators present.

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
		<input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>
Water Table Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	
Saturation Present? (includes capillary fringe)	Yes <input type="radio"/> No <input checked="" type="radio"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <u>No hydrology indicators present</u>		

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 Gates, Old River City/County: Bacon Isl. Sampling Date: 8/1/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 5A
 Investigator(s): J. Mahoney, A. Richy Section, Township, Range: T2N, R4E, sec 30
 Landform (hillslope, terrace, etc.): ditch Local relief (concave, convex, none): concave Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 37° 59' 9.5" Long: 121° 34' 44" Datum: NAD 83
 Soil Map Unit Name: RYDE CLAY LOAM, 0-2% SLOPES NWI classification: _____

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="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Remarks: <u>Man-made drainage ditch, with very steep sides</u> <u>Ditch is approx 3-4 feet wide.</u>				

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC:	<u>20</u> (A)
2. _____				Total Number of Dominant Species Across All Strata:	<u>20</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100</u> % (A/B)
4. _____				Prevalence Index worksheet:	
Total Cover: _____ %				Total % Cover of:	Multiply by:
Sapling/Shrub Stratum				OBL species	x 1 = 0
1. _____				FACW species	x 2 = 0
2. _____				FAC species	x 3 = 0
3. _____				FACU species	x 4 = 0
4. _____				UPL species	x 5 = 0
5. _____				Column Totals:	(A) 0 (B)
Total Cover: _____ %				Prevalence Index = B/A = _____	
Herb Stratum				Hydrophytic Vegetation Indicators:	
1. <u>Typha latifolia</u>	<u>30</u>	<u>4</u>	<u>OBL</u>	<input checked="" type="checkbox"/> Dominance Test is >50%	
2. <u>imbr. grass - Polypogon australis</u>	<u>5</u>		<u>FACW</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
3. <u>Sonchus asper</u>	<u>2</u>		<u>FAC</u>	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
4. <u>Urtica dioica</u>	<u>5</u>		<u>FACW</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
5. <u>Cirsium vulgare</u>	<u>2</u>		<u>FACU</u>		
6. <u>Juncus effusus</u>	<u>10</u>	<u>4</u>	<u>OBL</u>		
7. <u>Lemna sp.</u>	<u>20</u>		<u>OBL</u>		
8. _____					
Total Cover: _____ %				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Woody Vine Stratum					
1. _____					
2. _____					
Total Cover: _____ %					
% Bare Ground in Herb Stratum <u>5</u> %				% Cover of Biotic Crust _____ %	

Remarks:

SOIL

Sampling Point: 5A

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture ³	Remarks
	Color (moist)	%	Color (moist)	%				
0-16	10YR 2/1	95	10YR 5/6	5	C	M	clay loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☒ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☒ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:⁴

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks: _____

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
☐ High Water Table (A2)
☒ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☒ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Plowed Soils (C6)
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☒ No ☐Depth (inches): 12 inWater Table Present? Yes ☒ No ☐Depth (inches): surfaceSaturation Present? Yes ☒ No ☐
(includes capillary fringe)Depth (inches): 0 surfaceWetland 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: 2 Gates, Old River City/County: San Joaquin, Bacon Isl. Sampling Date: 8/1/08
 Applicant/Owner: Central Coast Water District State: CA Sampling Point: 5B
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N, R4E, Sec 30
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none/convex Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 37° 59' 9.5" Long: 121° 34' 44" Datum: NAD83
 Soil Map Unit Name: R4DE CLAY LOAM, 0-2% slopes NWI classification: _____

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: <u>On east side of drainage ditch. Cultivated fields at least 100 ft away, cover is ruderal</u>		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>/</u>				Number of Dominant Species That Are OBL, FACW, or FAC:	0 (A)
2.				Total Number of Dominant Species Across All Strata:	0 (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC:	0 % (A/B)
4.				Prevalence Index worksheet:	
Total Cover: %				Total % Cover of:	Multiply by:
Sapling/Shrub Stratum				OBL species	x 1 = 0
1. <u>/</u>				FACW species	x 2 = 0
2.				FAC species	x 3 = 0
3.				FACU species	x 4 = 0
4.				UPL species	x 5 = 0
5.				Column Totals:	(A) 0 (B)
Total Cover: %				Prevalence Index = B/A =	
Herb Stratum				Hydrophytic Vegetation Indicators:	
1. <u>Raphanus sativa</u> 99 y NL				<input checked="" type="checkbox"/> Dominance Test is >50%	
2. <u>Urtica dioica</u> 1 FACW				<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹	
3.				<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
4.				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
5.				¹ Indicators of hydric soil and wetland hydrology must be present.	
6.				Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	
7.					
8.					
Total Cover: %					
Woody Vine Stratum					
1.					
2.					
Total Cover: %					
% Bare Ground in Herb Stratum %				% Cover of Biotic Crust %	
Remarks:					

Sampling Point:

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | | | |
|--------------------------|-----------------------------------|--------------------------|----------------------------|
| <input type="checkbox"/> | Histosol (A1) | <input type="checkbox"/> | Sandy Redox (S5) |
| <input type="checkbox"/> | Histic Epipedon (A2) | <input type="checkbox"/> | Stripped Matrix (S6) |
| <input type="checkbox"/> | Black Histic (A3) | <input type="checkbox"/> | Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> | Hydrogen Sulfide (A4) | <input type="checkbox"/> | Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> | Stratified Layers (A5) (LRR C) | <input type="checkbox"/> | Depleted Matrix (F3) |
| <input type="checkbox"/> | 1 cm Muck (A9) (LRR D) | <input type="checkbox"/> | Redox Dark Surface (F6) |
| <input type="checkbox"/> | Depleted Below Dark Surface (A11) | <input type="checkbox"/> | Depleted Dark Surface (F7) |
| <input type="checkbox"/> | Thick Dark Surface (A12) | <input type="checkbox"/> | Redox Depressions (F8) |
| <input type="checkbox"/> | Sandy Mucky Mineral (S1) | <input type="checkbox"/> | Vernal Pools (F9) |
| <input type="checkbox"/> | Sandy Gleyed Matrix (S4) | | |

Indicators for Problematic Hydric Soils:

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☐ No ☒

Remarks: no hydric soils indicators present

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|--|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☐ No ☒ Depth (inches):

Saturation Present? Yes ☐ No ☒ Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: No hydrology indicators present.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 gates, Old River City/County: Bacon Isl., San Joaquin Sampling Date: 8/1/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 6A
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N, R4E, sec 30
 Landform (hillslope, terrace, etc.): in channel Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 37° 59' 16.7" Long: 121° 34' 43" Datum: NAD 83
 Soil Map Unit Name: R4DE CLAY LOAM, 0-2% SLOPES NWI classification: _____

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"/>	Is the Sampled Area within a Wetland?	Yes <input 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"/>		
Remarks: <u>Freshwater Marsh along edge of levee in Old River</u>				

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC:	<u>10</u> (A)
2. _____				Total Number of Dominant Species Across All Strata:	<u>10</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100</u> % (A/B)
4. _____				Total Cover: _____ %	
Sapling/Shrub Stratum				Prevalence Index worksheet:	
1. _____				Total % Cover of:	Multiply by:
2. _____				OBL species	x 1 = <u>0</u>
3. _____				FACW species	x 2 = <u>0</u>
4. _____				FAC species	x 3 = <u>0</u>
5. _____				FACU species	x 4 = <u>0</u>
				UPL species	x 5 = <u>0</u>
				Column Totals:	(A) <u>0</u> (B) <u>0</u>
				Prevalence Index = B/A = _____	
Herb Stratum				Hydrophytic Vegetation Indicators:	
1. <u>Schoenoplectus acutus</u>	<u>90</u>	<u>y</u>	<u>OBL</u>	<input checked="" type="checkbox"/> Dominance Test is >50%	
2. _____				<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
3. _____				<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
4. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
5. _____				¹ Indicators of hydric soil and wetland hydrology must be present.	
6. _____				Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
7. _____					
8. _____					
Woody Vine Stratum					
1. _____					
2. _____					
Total Cover: _____ %					
% Bare Ground in Herb Stratum <u>10</u> %		% Cover of Biotic Crust _____ %			
Remarks: <u>actually this is open water</u>					

Sampling Point: 6A

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils:⁴

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

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks: No soils present - Rip rap for levee.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|--|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 2-4 FT.

Water Table Present? Yes ☐ No ☐ Depth (inches): _____

Saturation Present? Yes ☐ No ☐ Depth (inches): _____
(includes capillary fringe)

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: 2 gates, Old River City/County: Bacon Isl., San Joaquin Sampling Date: 8/1/08
 Applicant/Owner: CONTRA COSTA WATER DISTRICT State: CA Sampling Point: 66
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N, R4E, SEC 30
 Landform (hillslope, terrace, etc.): river bank Local relief (concave, convex, none): convex Slope (%): 4-10
 Subregion (LRR): C - Mediterranean California Lat: 37° 59' 16.7" Long: 121° 34' 43" Datum: NAD 83
 Soil Map Unit Name: RYDE CLAY LOAM, 0-2% SLOPES NWI classification: _____

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 checked="" type="radio"/> No <input type="radio"/>		
Remarks: <u>Ordinary high water mark present - visible with wrack line deposited along riprap. GPS line is mark of riprap wrack line along riprap.</u>			

VEGETATION

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

Sampling Point: 6B

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils:

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☐ No ☒

Remarks: No soil profile, this is a rip-rapped levee.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1) (Nonriverine)
- ☐ Sediment Deposits (B2) (Nonriverine)
- ☐ Drift Deposits (B3) (Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ 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) |

Secondary Indicators (2 or more required)

- ☒ Water Marks (B1) (Riverine)
- ☒ Sediment Deposits (B2) (Riverine)
- ☒ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☐ No ☐ Depth (inches):

Saturation Present? Yes ☐ No ☐ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks: obvious vegetation wrack line, sediment deposits on the rock rip rap. water marks are visible on vegetation w/in the channel (see 6A).

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 gates, Old River City/County: Bacon Isl, San Joaquin Sampling Date: 8/1/08
 Applicant/Owner: CONTRA COSTA COASTER DISTRICT State: CA Sampling Point: 6C
 Investigator(s): T Mahony, A. Reichey Section, Township, Range: T2N R4E, Sec 30
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 4-6
 Subregion (LRR): C - Mediterranean California Lat: 39° 59' 16.7" Long: 121° 34' 43" Datum: NAD83
 Soil Map Unit Name: R40E CLAY LOAM, 0-2% slopes NWI classification: _____

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"/>	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: <u>Point is located above high tide line / OHW mark, near levee road.</u>					

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC:	<u>20</u> (A)
2. _____				Total Number of Dominant Species Across All Strata:	<u>30</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>66.0</u> % (A/B)
4. _____				Prevalence Index worksheet:	
Total Cover: _____ %				Total % Cover of:	Multiply by:
Sapling/Shrub Stratum				OBL species	x 1 = <u>0</u>
1. _____				FACW species	x 2 = <u>0</u>
2. _____				FAC species	x 3 = <u>0</u>
3. _____				FACU species	x 4 = <u>0</u>
4. _____				UPL species	x 5 = <u>0</u>
5. _____				Column Totals:	(A) <u>0</u> (B) <u>0</u>
Total Cover: _____ %				Prevalence Index = B/A = _____	
Herb Stratum				Hydrophytic Vegetation Indicators:	
1. <u>Arundo donax</u>	<u>20</u>	<u>y</u>	<u>FACW</u>	<input checked="" type="checkbox"/> Dominance Test is >50%	
2. <u>Cynodon dactylon</u>	<u>20</u>	<u>y</u>	<u>FAC</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
3. <u>anagallis willowherb - Epilobium sp.</u>	<u>5</u>			<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
4. <u>Raphanus sativus</u>	<u>10</u>	<u>y</u>	<u>NL</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
5. _____				¹ Indicators of hydric soil and wetland hydrology must be present.	
6. _____				Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
7. _____					
8. _____					
Total Cover: _____ %					
Woody Vine Stratum					
1. _____					
2. _____					
Total Cover: _____ %					
% Bare Ground in Herb Stratum <u>45</u> %				% Cover of Biotic Crust _____ %	

Remarks:

6/8 is mprap.
This ruderal vegetation has established between rocks of Rprap & m disaggregated gravels of the levee.

SOIL

Sampling Point: 6C

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture ³	Remarks
	Color (moist)	%	Color (moist)	%				
								<i>no soil</i>

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:⁴

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

No soil profile development. Disaggregated fines & gravels present, which support the ruderal vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Plowed Soils (C6)
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☐ Depth (inches): _____Water Table Present? Yes ☐ No ☐ Depth (inches): _____Saturation Present? Yes ☐ No ☐ Depth (inches): _____
(includes capillary fringe)Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

No hydrology indicators present.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 Gates- Old River City/County: Bacon Ist., San Joa. Sampling Date: 8/1/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 7A
 Investigator(s): T. Mahony, A. Richy Section, Township, Range: T2N, R4E, sec 30
 Landform (hillslope, terrace, etc.): River channel Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 37° 58' 58" Long: 121° 34' 48" Datum: NAD83
 Soil Map Unit Name: R4D2 CLAY Loam, 0-2% slopes NWI classification: _____

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="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: <u>Freshwater marsh area within old River channel, alongside levee.</u>		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC:	<u>20</u> (A)
2. _____				Total Number of Dominant Species Across All Strata:	<u>20</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100</u> % (A/B)
4. _____				Prevalence Index worksheet:	
Total Cover: _____ %				Total % Cover of:	Multiply by:
Sapling/Shrub Stratum				OBL species	x 1 = 0
1. _____				FACW species	x 2 = 0
2. _____				FAC species	x 3 = 0
3. _____				FACU species	x 4 = 0
4. _____				UPL species	x 5 = 0
5. _____				Column Totals:	(A) 0 (B)
Total Cover: _____ %				Prevalence Index = B/A = _____	
Herb Stratum				Hydrophytic Vegetation Indicators:	
1. <u>Schoenoplectus acutus</u>	<u>50</u>	<u>y</u>	<u>OBL</u>	<input checked="" type="checkbox"/> Dominance Test is >50%	
2. <u>" Californicus</u>	<u>50</u>	<u>y</u>	<u>OBL</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
3. _____				<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
4. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
5. _____				¹ Indicators of hydric soil and wetland hydrology must be present.	
6. _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
7. _____					
8. _____					
Total Cover: _____ %					
Woody Vine Stratum					
1. _____					
2. _____					
Total Cover: _____ %					
% Bare Ground in Herb Stratum _____ %				% Cover of Biotic Crust _____ %	

Remarks:

SOIL

Sampling Point: 7A

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

Depth (inches)	Matrix		Redox Features			Loc ²	Texture ³	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-6	10YR 3/1	80	10YR 4/6	20			clay loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|---|
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Vernal Pools (F9) |

Indicators for Problematic Hydric Soils:⁴

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (2 or more required)

- ☒ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 6-12Water Table Present? Yes ☒ No ☐ Depth (inches): _____Saturation Present? Yes ☒ No ☐ Depth (inches): _____
(includes capillary fringe)Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

High water marks visible on marsh vegetation.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 gates, Old River City/County: Bacon Isl, San Joaquin Sampling Date: 8/1/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 4B
 Investigator(s): T. Mahoney, A. Richey Section, Township, Range: 72N, R4E, sec 30
 Landform (hillslope, terrace, etc.): hillslope, top Local relief (concave, convex, none): convex to none Slope (%): 4-6
 Subregion (LRR): C - Mediterranean California Lat: 37° 58' 58" Long: 121° 34' 48" Datum: NAD 83
 Soil Map Unit Name: R4DE CLAY LOAM, 0-2% slopes NWI classification: _____

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: <u>Upland edge of levee, to the west of Levee Road.</u>		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC:	0 (A)
2. _____				Total Number of Dominant Species Across All Strata:	0 (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC:	0% (A/B)
4. _____				Prevalence Index worksheet:	
Total Cover: _____ %				Total % Cover of:	Multiply by:
Sapling/Shrub Stratum				OBL species	x 1 = 0
1. _____				FACW species	x 2 = 0
2. _____				FAC species	x 3 = 0
3. _____				FACU species	x 4 = 0
4. _____				UPL species	x 5 = 0
5. _____				Column Totals:	(A) 0 (B)
Total Cover: _____ %				Prevalence Index = B/A = _____	
Herb Stratum				Hydrophytic Vegetation Indicators:	
1. <u>Raphanus sativa</u>	<u>65</u>	<u>y</u>	<u>NL</u>	<input checked="" type="checkbox"/> Dominance Test is >50%	
2. <u>Lonicera japonica</u>	<u>20</u>	<u>y</u>	<u>NI</u>	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹	
3. <u>Arundo donax</u>	<u>15</u>	<u>N</u>	<u>FACW</u>	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
4. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
5. _____				¹ Indicators of hydric soil and wetland hydrology must be present.	
6. _____				Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	
7. _____					
8. _____					
Total Cover: _____ %					
Woody Vine Stratum					
1. _____					
2. _____					
Total Cover: _____ %					
% Bare Ground in Herb Stratum <u>0</u> % % Cover of Biotic Crust _____ %					
Remarks: <u>Raphanus-derived thatch covers much of site.</u>					

SOIL

Sampling Point: 7B

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

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

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Vernal Pools (F9) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils:⁴

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒Remarks: *Poor soil development, with interspersed areas of silt/clay. No hydric indicators*

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|--|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): -
 Water Table Present? Yes ☐ No ☒ Depth (inches): -
 Saturation Present? Yes ☐ No ☒ Depth (inches): -
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: *No hydrology indicators present.*

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 gates, Old River City/County: Bacon Isl. San Joaquin Sampling Date: 8/1/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 8A
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N, R4E, sec 30
 Landform (hillslope, terrace, etc.): in a ditch Local relief (concave, convex, none): slight slope Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 37° 59' 7.5" Long: 121° 34' 45" Datum: NAD83
 Soil Map Unit Name: R4PE CLAY LOAM, 0-2% slopes NWI classification: _____

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="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Remarks: <u>No visible culvert observed - inlet-outlet not visible</u>				

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>/</u>				Number of Dominant Species That Are OBL, FACW, or FAC:	0 (A)
2.				Total Number of Dominant Species Across All Strata:	0 (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC:	0 % (A/B)
4.					
Total Cover: %					
Sapling/Shrub Stratum				Prevalence Index worksheet:	
1. <u>/</u>				Total % Cover of:	Multiply by:
2.				OBL species	x 1 = 0
3.				FACW species	x 2 = 0
4.				FAC species	x 3 = 0
5.				FACU species	x 4 = 0
				UPL species	x 5 = 0
Total Cover: %				Column Totals:	(A) 0 (B)
Herb Stratum				Prevalence Index = B/A =	
1. <u>Typha latifolia</u>	70	Y	OBL		
2. <u>wink grass - Polypogon australis</u>	10		FACW		
3. <u>Epilobium sp.</u>	5				
4. <u>Polygonum amphibium</u>	5		OBL		
5. <u>Urtica dioica</u>	2		FACW		
6. <u>Lemna sp.</u>	5		OBL		
7. <u>Datura sp.</u>	7		NL		
8.					
Total Cover: %					
Woody Vine Stratum				Hydrophytic Vegetation Indicators:	
1.				<input checked="" type="checkbox"/> Dominance Test is >50%	
2.				<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
				<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
				¹ Indicators of hydric soil and wetland hydrology must be present.	
				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
% Bare Ground in Herb Stratum <u>0</u> % % Cover of Biotic Crust _____ %					

Remarks:

Sampling Point: 8A

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils:

- | | |
|--------------------------|-----------------------------------|
| <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) (LRR C) |
| <input type="checkbox"/> | 1 cm Muck (A9) (LRR D) |
| <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) |

- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1) (Nonriverine)
- ☐ Sediment Deposits (B2) (Nonriverine)
- ☐ Drift Deposits (B3) (Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☒ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)

- | | |
|-------------------------------------|---|
| <input type="checkbox"/> | Salt Crust (B11) |
| <input type="checkbox"/> | Biotic Crust (B12) |
| <input type="checkbox"/> | Aquatic Invertebrates (B13) |
| <input checked="" type="checkbox"/> | Hydrogen Sulfide Odor (C1) |
| <input checked="" 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) |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☒ No ☐

Water Table Present? Yes ☐ No ☐

Saturation Present? Yes ☐ No ☐

Depth (inches): 12

Depth (inches):

Depth (inches):

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 gates, Old River City/County: Imperial, San Joaquin Sampling Date: 8/1/08
 Applicant/Owner: Contra Costa Water Dist. State: CA Sampling Point: 8B
 Investigator(s): T. Mahony, A. Richy Section, Township, Range: T2N R4E, sec 30
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): slight convex Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 37°59' 7.5" Long: 121°34'45" Datum: NAD 83
 Soil Map Unit Name: RHDE CLAY Loam, 0-2% slopes NWI classification: _____

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="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: <u>It appears that dredge spoils have been deposited in this area. Heavily disturbed.</u>		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>/</u>				Number of Dominant Species That Are OBL, FACW, or FAC:	<u>10</u> (A)
2.				Total Number of Dominant Species Across All Strata:	<u>10</u> (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100</u> % (A/B)
4.				Prevalence Index worksheet:	
Total Cover: _____ %				Total % Cover of:	Multiply by:
Sapling/Shrub Stratum				OBL species	x 1 = <u>0</u>
1. <u>/</u>				FACW species	x 2 = <u>0</u>
2.				FAC species	x 3 = <u>0</u>
3.				FACU species	x 4 = <u>0</u>
4.				UPL species	x 5 = <u>0</u>
5.				Column Totals:	(A) <u>0</u> (B) <u>0</u>
Total Cover: _____ %				Prevalence Index = B/A = _____	
Herb Stratum				Hydrophytic Vegetation Indicators:	
1. <u>Cynodon dactylon</u>	<u>95</u>	<u>Y</u>	<u>FAC</u>	<input checked="" type="checkbox"/> Dominance Test is >50%	
2. <u>Urtica dioica</u>	<u>2</u>		<u>FACW</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
3.				<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
4.				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
5.				¹ Indicators of hydric soil and wetland hydrology must be present.	
6.				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
7.					
8.					
Total Cover: _____ %					
Woody Vine Stratum					
1.					
2.					
Total Cover: _____ %					
% Bare Ground in Herb Stratum <u>3</u> %				% Cover of Biotic Crust _____ %	
Remarks: <u>63% Thatch.</u>					

Sampling Point:

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Vernal Pools (F9) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils:⁴

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☐

No 6

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|--|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☐ No ☐ Depth (inches):

Saturation Present? Yes ☐ No ☐ Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☐

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

Remarks:

No hydrology indicators present.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 gates, Old River Holland Tract City/County: Contra Costa, Holland T. Sampling Date: 8/4/08
 Applicant/Owner: Contra Costa Water Dist. State: CA Sampling Point: 9A
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N, R4E, sec 30
 Landform (hillslope, terrace, etc.): basin Local relief (concave, convex, none): slight depression Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 37° 59' 16.7" Long: 121° 34' 58" Datum: NAD 83
 Soil Map Unit Name: RINDGE MUCK NWI classification: _____

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"/>	Is the Sampled Area within a Wetland? 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"/>	
Remarks: <u>Point located on edge of cattle pasture on E side of ditch, between ditch & levee road. Point is in a shallow basin, topographically distinct from Point 9B.</u>		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>20</u> (A) Total Number of Dominant Species Across All Strata: <u>20</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> % (A/B)														
1.																		
2.																		
3.																		
Total Cover: _____ %				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr><td>OBL species</td><td>x 1 = <u>0</u></td></tr> <tr><td>FACW species</td><td>x 2 = <u>0</u></td></tr> <tr><td>FAC species</td><td>x 3 = <u>0</u></td></tr> <tr><td>FACU species</td><td>x 4 = <u>0</u></td></tr> <tr><td>UPL species</td><td>x 5 = <u>0</u></td></tr> <tr><td>Column Totals:</td><td>(A) <u>0</u> (B)</td></tr> </tbody> </table> Prevalence Index = B/A = _____	Total % Cover of:	Multiply by:	OBL species	x 1 = <u>0</u>	FACW species	x 2 = <u>0</u>	FAC species	x 3 = <u>0</u>	FACU species	x 4 = <u>0</u>	UPL species	x 5 = <u>0</u>	Column Totals:	(A) <u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species	x 1 = <u>0</u>																	
FACW species	x 2 = <u>0</u>																	
FAC species	x 3 = <u>0</u>																	
FACU species	x 4 = <u>0</u>																	
UPL species	x 5 = <u>0</u>																	
Column Totals:	(A) <u>0</u> (B)																	
Sapling/Shrub Stratum 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: _____ %																		
Herb Stratum 1. <u>Lolium multiflorum</u> 50 y FAC 2. <u>Rumex crispus</u> 5 PACW 3. <u>Xanthium strumarium</u> 5 FAC 4. <u>Lotus corniculatus</u> 10 FAC 5. <u>Cirsium vulgare</u> 2 FACU 6. <u>Sonchus asper</u> 1 FAC 7. <u>Cynodon dactylon</u> 40 y FAC 8. <u>Polygonum arenastrum</u> 2 NL Total Cover: _____ %																		
Woody Vine Stratum 1. _____ 2. _____ Total Cover: _____ %																		
% Bare Ground in Herb Stratum <u>0</u> % % Cover of Biotic Crust _____ %																		

Remarks:

SOIL

Sampling Point: 9A

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture ³	Remarks
	Color (moist)	%	Color (moist)	%				
0-16	10YR2/1	95	10YR 5/6	5	C	m	loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Vernal Pools (F9) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils:⁴

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Redox difficult to see due to very dark matrix color.
Soils are moist.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): - Water Table Present? Yes ☐ No ☒ Depth (inches): - Saturation Present? Yes ☐ No ☒ Depth (inches): -
(includes capillary fringe)Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

a distinct topographic break accompanies the change in vegetation along edge. Soils are moist, not saturated.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 gates, Old River City/County: CCCo. Holland Tract Sampling Date: 8/4/08
 Applicant/Owner: Contra Costa Water Dist. State: CA Sampling Point: 9B
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N, R4E, sec30
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): slight convex Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 37° 59' 16.7" Long: 121° 34' 58" Datum: NAD83
 Soil Map Unit Name: RINDGE Muck NWI classification:

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: <u>On topographically higher area than 9A.</u>			

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>10</u> (A) Total Number of Dominant Species Across All Strata: <u>30</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33%</u> (A/B)														
1.																		
2.																		
3.																		
4.																		
Total Cover: %				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr><td>OBL species</td><td>x 1 =</td></tr> <tr><td>FACW species</td><td>x 2 =</td></tr> <tr><td>FAC species</td><td>x 3 =</td></tr> <tr><td>FACU species</td><td>x 4 =</td></tr> <tr><td>UPL species</td><td>x 5 =</td></tr> <tr><td>Column Totals:</td><td>(A) (B)</td></tr> </tbody> </table> Prevalence Index = B/A =	Total % Cover of:	Multiply by:	OBL species	x 1 =	FACW species	x 2 =	FAC species	x 3 =	FACU species	x 4 =	UPL species	x 5 =	Column Totals:	(A) (B)
Total % Cover of:	Multiply by:																	
OBL species	x 1 =																	
FACW species	x 2 =																	
FAC species	x 3 =																	
FACU species	x 4 =																	
UPL species	x 5 =																	
Column Totals:	(A) (B)																	
Sapling/Shrub Stratum																		
1.																		
2.																		
3.																		
4.																		
5.																		
Total Cover: %																		
Herb Stratum																		
1. <u>Bromus diandrus</u>	<u>40</u>	<u>y</u>	<u>NL</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.														
2. <u>Hordeum murinum</u>	<u>30</u>	<u>y</u>	<u>NL</u>															
3. <u>Cynodon dactylon</u>	<u>30</u>	<u>y</u>	<u>FAC</u>															
4.																		
5.																		
6.																		
7.																		
8.																		
Total Cover: %																		
Woody Vine Stratum																		
1.																		
2.																		
Total Cover: %																		
% Bare Ground in Herb Stratum <u>0</u> %	% Cover of Biotic Crust	%		Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/>														

Remarks:

9B

[illegible]²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Indicators for Problematic Hydric Soils:⁴

- | | | |
|--|---|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> 1 cm Muck (A9) (LRR C) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> 2 cm Muck (A10) (LRR B) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) | <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D) | <input type="checkbox"/> Redox Dark Surface (F6) | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Vernal Pools (F9) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | |
- 4Indicators of hydrophytic vegetation wetland hydrology must be

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Type:

Depth (inches):

Hydric Soil Present? Yes ☐ No ☒

Remarks:

Secondary Indicators (2 or more required)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Water-Stained Leaves (B9)	

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Surface Water Present? Yes ☐ No ☐ Depth (inches): _____

Water Table Present? Yes ☐ No ☐ Depth (inches): _____

Saturation Present? Yes ☐ No ☐ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

No hydrology indicators observed.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 gates, Old River City/County: CCCo, Hollands Tract Sampling Date: 8/4/08
 Applicant/Owner: CONTRA COSTA WATER DIST. State: CA Sampling Point: 10A
 Investigator(s): T. Mahony, A. Richy Section, Township, Range: T2N, R4E, sec30
 Landform (hillslope, terrace, etc.): shallow basin Local relief (concave, convex, none): slight concave Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 37° 59' 18.7" Long: 121° 34' 57" Datum: NAD 83
 Soil Map Unit Name: RINDGE MUCK NWI classification: _____

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"/>	Is the Sampled Area within a Wetland?	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"/>		
Remarks:			

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>10</u> (A) Total Number of Dominant Species Across All Strata: <u>10</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> % (A/B) Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals:</td> <td>(A) <u>0</u> (B) <u>0</u></td> </tr> </tbody> </table> Prevalence Index = B/A = _____ Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present. Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Total % Cover of:	Multiply by:	OBL species	x 1 = <u>0</u>	FACW species	x 2 = <u>0</u>	FAC species	x 3 = <u>0</u>	FACU species	x 4 = <u>0</u>	UPL species	x 5 = <u>0</u>	Column Totals:	(A) <u>0</u> (B) <u>0</u>
Total % Cover of:	Multiply by:																	
OBL species	x 1 = <u>0</u>																	
FACW species	x 2 = <u>0</u>																	
FAC species	x 3 = <u>0</u>																	
FACU species	x 4 = <u>0</u>																	
UPL species	x 5 = <u>0</u>																	
Column Totals:	(A) <u>0</u> (B) <u>0</u>																	
1. _____																		
2. _____																		
3. _____																		
4. _____																		
Total Cover: _____ %																		
Sapling/Shrub Stratum																		
1. _____																		
2. _____																		
3. _____																		
4. _____																		
5. _____																		
Total Cover: _____ %																		
Herb Stratum																		
1. <u>Lolium multiflorum</u>	<u>85</u>	<u>y</u>	<u>FAC</u>															
2. <u>Xanthium strumarium</u>	<u>5</u>		<u>FAC+</u>															
3. <u>Rumex crispus</u>	<u>5</u>		<u>FACW</u>															
4. <u>Lotus corniculatus</u>	<u>5</u>		<u>FAC</u>															
5. _____																		
6. _____																		
7. _____																		
8. _____																		
Total Cover: _____ %																		
Woody Vine Stratum																		
1. _____																		
2. _____																		
Total Cover: _____ %																		
% Bare Ground in Herb Stratum _____ %	% Cover of Biotic Crust _____ %																	

Remarks:

SOIL

Sampling Point: 10A

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

Depth (inches)	Matrix		Redox Features				Texture ³	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR2/1	95	10YR2/1	5	C	M	Loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☒ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:⁴

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Dark soils likely obscuring likely stronger redox features.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☒ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Plowed Soils (C6)
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): —
 Water Table Present? Yes ☐ No ☒ Depth (inches): —
 Saturation Present? Yes ☐ No ☒ Depth (inches): —
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

Soils are moist.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 gates, Old River City/County: CCo, Hollauro Tract Sampling Date: 8/4/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 10 B
 Investigator(s): T. Mahony A. Richey Section, Township, Range: T2N, R4E, Sec 30
 Landform (hillslope, terrace, etc.): slight hill Local relief (concave, convex, none): convex Slope (%): 0.5
 Subregion (LRR): C - Mediterranean California Lat: 37° 59' 18.7" Long: 121° 34' 57" Datum: NAD 83
 Soil Map Unit Name: RINDGE Muck NWI classification:

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: <u>Topographically, vegetatively distinct from 10A.</u>			

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>10</u> (A) Total Number of Dominant Species Across All Strata: <u>30</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33%</u> (A/B)														
1.																		
2.																		
3.																		
4.																		
Total Cover: %				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr><td>OBL species</td><td>x 1 =</td></tr> <tr><td>FACW species</td><td>x 2 =</td></tr> <tr><td>FAC species</td><td>x 3 =</td></tr> <tr><td>FACU species</td><td>x 4 =</td></tr> <tr><td>UPL species</td><td>x 5 =</td></tr> <tr><td>Column Totals:</td><td>(A) (B)</td></tr> </tbody> </table> Prevalence Index = B/A =	Total % Cover of:	Multiply by:	OBL species	x 1 =	FACW species	x 2 =	FAC species	x 3 =	FACU species	x 4 =	UPL species	x 5 =	Column Totals:	(A) (B)
Total % Cover of:	Multiply by:																	
OBL species	x 1 =																	
FACW species	x 2 =																	
FAC species	x 3 =																	
FACU species	x 4 =																	
UPL species	x 5 =																	
Column Totals:	(A) (B)																	
Sapling/Shrub Stratum																		
1.																		
2.																		
3.																		
4.																		
5.																		
Total Cover: %																		
Herb Stratum																		
1. <u>Centaurea solstitialis</u>	<u>25</u>	<u>y</u>	<u>NL</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.														
2. <u>Bromus diandrus</u>	<u>10</u>		<u>NL</u>															
3. <u>Hordeum marinum</u>	<u>25</u>	<u>y</u>	<u>NL</u>															
4. <u>Lactuca serriola</u>	<u>5</u>		<u>FAC</u>															
5. <u>Lepidium latifolium</u>	<u>20</u>	<u>y</u>	<u>FACW</u>															
6. <u>Raphanus sativa</u>	<u>2</u>		<u>NL</u>															
7. <u>Lotium multiflorum</u>	<u>0</u>		<u>FAC</u>															
8.																		
Total Cover: %																		
Woody Vine Stratum																		
1.																		
2.																		
Total Cover: %																		
% Bare Ground in Herb Stratum %	% Cover of Biotic Crust %																	

Remarks:

SOIL

Sampling Point: 10B

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

Depth (inches)	Matrix		Redox Features				Texture ³	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR2/2	99	10YR4/6	1	C	M	loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:⁴

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Depth (inches): Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Plowed Soils (C6)
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

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:

Soils are dry. no hydrology indicators present.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 gates, Old River City/County: CLCo. Holland Tract Sampling Date: 8/4/08
 Applicant/Owner: CONTRA COSTA WATER DIST. State: CA Sampling Point: 11A
 Investigator(s): T. Mahony, A. Pichay Section, Township, Range: T2N, R4E, sec 30
 Landform (hillslope, terrace, etc.): ditch Local relief (concave, convex, none): convex Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 37° 59' 22" Long: 121° 34' 57" Datum: NAD 83
 Soil Map Unit Name: RINDGE Muck NWI classification:

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="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: <u>located in man-made drainage ditch on edge of a cattle pasture. Channel is 24ft. in width.</u>			

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>20</u> (A) Total Number of Dominant Species Across All Strata: <u>20</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> % (A/B) Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td>x 1 = 0</td> </tr> <tr> <td>FACW species</td> <td>x 2 = 0</td> </tr> <tr> <td>FAC species</td> <td>x 3 = 0</td> </tr> <tr> <td>FACU species</td> <td>x 4 = 0</td> </tr> <tr> <td>UPL species</td> <td>x 5 = 0</td> </tr> <tr> <td>Column Totals:</td> <td>(A) 0 (B)</td> </tr> </tbody> </table> Prevalence Index = B/A = <u>0</u> Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present. Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Total % Cover of:	Multiply by:	OBL species	x 1 = 0	FACW species	x 2 = 0	FAC species	x 3 = 0	FACU species	x 4 = 0	UPL species	x 5 = 0	Column Totals:	(A) 0 (B)
Total % Cover of:	Multiply by:																	
OBL species	x 1 = 0																	
FACW species	x 2 = 0																	
FAC species	x 3 = 0																	
FACU species	x 4 = 0																	
UPL species	x 5 = 0																	
Column Totals:	(A) 0 (B)																	
1.																		
2.																		
3.																		
4.																		
Total Cover: %																		
Sapling/Shrub Stratum																		
1.																		
2.																		
3.																		
4.																		
5.																		
Total Cover: %																		
Herb Stratum																		
1. <u>Juncus effusus</u>	<u>50</u>	<u>y</u>	<u>OBL</u>															
2. <u>Rubus discolor</u>	<u>40</u>	<u>y</u>	<u>FAC</u>															
3. <u>Festuca arundinacea</u>	<u>5</u>		<u>FAC</u>															
4. <u>Urtica dioica</u>	<u>2</u>		<u>FACW</u>															
5. <u>Lonicera canadensis</u>	<u>3</u>		<u>FAC</u>															
6.																		
7.																		
8.																		
Total Cover: %																		
Woody Vine Stratum																		
1.																		
2.																		
Total Cover: %																		
% Bare Ground in Herb Stratum <u>0</u> %	% Cover of Biotic Crust																	

Remarks:

Sampling Point: ~~FOA~~ 11A

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils:⁴

Indicators for Problematic Hydric Soils:⁴

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

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):	
---------------------------------	--

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|---|--|--|
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) | <input type="checkbox"/> Sediment Deposits (B2) (Riverine) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) | <input type="checkbox"/> Drift Deposits (B3) (Riverine) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | | <input type="checkbox"/> FAC-Neutral Test (D5) |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:	
---------------------	--

Surface Water Present? Yes ☒ No ☐ Depth (inches): 12

Water Table Present? Yes ☒ No ☐ Depth (inches): surface

Saturation Present? Yes ☒ No ☐ Depth (inches): 14.5

Depth (inches): 12

Depth (inches): surface

Depth (inches): 1 surface

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: 2 gates, Old River City/County: Colo, Hollands Tract Sampling Date: 8/4/08
 Applicant/Owner: Contra Costa Water Dist. State: CA Sampling Point: 1 B
 Investigator(s): T. Madony, A. Richy Section, Township, Range: T2N, R4E, sec 30
 Landform (hillslope, terrace, etc.): slight terrace Local relief (concave, convex, none): convex Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 37° 59' 22" Long: 121° 34' 57" Datum: NAD 83
 Soil Map Unit Name: RIND&E MUCK NWI classification: _____

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"/>	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: <u>West of ditch. Wetland area may be present west of bullock described here; out of study area.</u>			

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>20</u> (A) Total Number of Dominant Species Across All Strata: <u>30</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.6</u> % (A/B)																					
1.																									
2.																									
3.																									
4.																									
Total Cover: _____ %				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> <th></th> </tr> </thead> <tbody> <tr><td>OBL species</td><td>x 1 =</td><td>0</td></tr> <tr><td>FACW species</td><td>x 2 =</td><td>0</td></tr> <tr><td>FAC species</td><td>x 3 =</td><td>0</td></tr> <tr><td>FACU species</td><td>x 4 =</td><td>0</td></tr> <tr><td>UPL species</td><td>x 5 =</td><td>0</td></tr> <tr><td>Column Totals:</td><td>(A)</td><td>0 (B)</td></tr> </tbody> </table> Prevalence Index = B/A = _____	Total % Cover of:	Multiply by:		OBL species	x 1 =	0	FACW species	x 2 =	0	FAC species	x 3 =	0	FACU species	x 4 =	0	UPL species	x 5 =	0	Column Totals:	(A)	0 (B)
Total % Cover of:	Multiply by:																								
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FACW species	x 2 =	0																							
FAC species	x 3 =	0																							
FACU species	x 4 =	0																							
UPL species	x 5 =	0																							
Column Totals:	(A)	0 (B)																							
Sapling/Shrub Stratum																									
1.																									
2.																									
3.																									
4.																									
Total Cover: _____ %																									
Herb Stratum																									
1. <u>Cirsium vulgare</u>	<u>35</u>	<u>y</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.																					
2. <u>Corypha canadensis</u>	<u>25</u>	<u>y</u>	<u>FAC</u>																						
3. <u>Rubus discolor</u>	<u>25</u>	<u>y</u>	<u>FAC</u>																						
4. <u>Conium maculatum</u>	<u>5</u>		<u>FACW</u>																						
5. <u>Lepidium latifolium</u>	<u>5</u>		<u>FACW</u>																						
6. <u>Festuca arundinacea</u>	<u>5</u>		<u>FAC-</u>																						
7.																									
8.																									
Total Cover: _____ %																									
Woody Vine Stratum																									
1.																									
2.																									
Total Cover: _____ %																									
% Bare Ground in Herb Stratum <u>0</u> %	% Cover of Biotic Crust _____ %																								

Remarks: _____

SOIL

Sampling Point: 11B

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

Depth (inches)	Matrix		Redox Features				Texture ³	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR2/1	99	10YR4/6	1	C	m	Loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:⁴

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Plowed Soils (C6)
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☐ Depth (inches): _____Water Table Present? Yes ☐ No ☐ Depth (inches): _____Saturation Present? Yes ☐ No ☐ Depth (inches): _____

(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

Soils are dry. No hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 2 Gates, Old River City/County: CCCo, Holland Tract Sampling Date: 8/4/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 18A
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N R4E, sec30
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): concave Slope (%): 4-8
 Subregion (LRR): C-Med. Calif. Lat: 37° 59' 21" Long: 121° 34' 55" Datum: NAD83
 Soil Map Unit Name: RINDGE MUCK NWI classification: _____

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 _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: <u>This point is an other waters - Old River. a Navigable water.</u>		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	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)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____	_____	_____	_____	
Sapling/Shrub Stratum				
1. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ¹ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: _____	_____	_____	_____	
Woody Vine Stratum				
1. _____	_____	_____	_____	Indicators of hydric soil and wetland hydrology must be present.
2. _____	_____	_____	_____	
Total Cover: _____	_____	_____	_____	
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				

Remarks: No vegetation present - riprap for levee

Sampling Point: 18A

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> 1 cm Muck (A9) (LRR C) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> 2 cm Muck (A10) (LRR B) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) | <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D) | <input type="checkbox"/> Redox Dark Surface (F6) | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Vernal Pools (F9) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | |
- ³Indicators of hydrophytic vegetation and wetland hydrology must be present

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Hydric Soil Present? Yes _____ No ☒

Type: _____

Depth (inches): _____

Remarks:

No soil present. Rip rap only

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|---|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input checked="" type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input checked="" type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input checked="" type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) |
| <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (2 or more required)

- ☒ Water Marks (B1) (**Riverine**)
- ☒ Sediment Deposits (B2) (**Riverine**)
- ☒ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): unk - Old River

Water Table Present? Yes ☒ No ☐ Depth (inches): _____

Saturation Present? Yes ☒ No ☐ Depth (inches): _____
(includes capillary fringe)

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: 2 gates, Old River City/County: CCCo, Holland Tract Sampling Date: 8/4/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 18B
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N R4E, sec 30
 Landform (hillslope, terrace, etc.): hillslope (bank) Local relief (concave, convex, none): convex Slope (%): 4-10
 Subregion (LRR): C-Med Calif. Lat: 37° 59' 21" Long: 121° 34' 55" Datum: NAD83
 Soil Map Unit Name: RIDGE Muck NWI classification: _____

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 _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes _____ No <input checked="" type="checkbox"/>	
Remarks: <u>On vegetated bank above at Old River.</u>		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				
Sapling/Shrub Stratum				
1. <u>Juglans hindsii</u>	<u>2</u>	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				
Herb Stratum				
1. <u>unk Grass (dallis-like)</u>	<u>10</u>	_____	_____	Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ¹ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. <u>Lepidium latifolium</u>	<u>20</u>	_____	<u>FACW</u>	
3. <u>Bromus diandrus</u>	<u>20</u>	<u>y</u>	<u>NL</u>	
4. <u>Cynodon dactylon</u>	<u>50</u>	<u>y</u>	<u>FAC</u>	
Total Cover: _____				
Woody Vine Stratum				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust _____				

Remarks:

Sampling Point: 18 B

HYDROLOGY

Arid West – Version 11-1-2006

WETLAND DETERMINATION DATA FORM – Arid West Region

(August 4)

Project/Site: 2 Gates, Old River City/County: CCCo. Hollands Tract Sampling Date: 8/14/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 19A
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N R4E, Sec 30
 Landform (hillslope, terrace, etc.): river bank Local relief (concave, convex, none): concave Slope (%): 4-6
 Subregion (LRR): C-Medit. Calif. Lat: 37° 59' 13" Long: 121° 34' 56" Datum: NAD83
 Soil Map Unit Name: Rivog Muck / Water NWI classification: _____

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="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: <u>a patch of wetlands emergent vegetation along the levee of Old River.</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u>	(A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u>	(B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u>	(A/B)
4. _____	_____	_____	_____	Total Cover: _____	
Sapling/Shrub Stratum				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of: _____	Multiply by: _____
2. _____	_____	_____	_____	OBL species _____ x 1 = _____	
3. _____	_____	_____	_____	FACW species _____ x 2 = _____	
4. _____	_____	_____	_____	FAC species _____ x 3 = _____	
5. _____	_____	_____	_____	FACU species _____ x 4 = _____	
Total Cover: _____				UPL species _____ x 5 = _____	
Herb Stratum				Column Totals: _____	(A) _____ (B) _____
1. <u>Schoenoplectus californicus</u>	_____	_____	_____	Prevalence Index = B/A = _____	
2. _____	_____	_____	_____	Hydrophytic Vegetation Indicators:	
3. _____	_____	_____	_____	___ Dominance Test is >50%	
4. _____	_____	_____	_____	___ Prevalence Index is ≤3.0 ¹	
5. _____	_____	_____	_____	___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
6. _____	_____	_____	_____	___ Problematic Hydrophytic Vegetation ¹ (Explain)	
7. _____	_____	_____	_____	___	
8. _____	_____	_____	_____	___	
Total Cover: _____				___	
Woody Vine Stratum				___	
1. _____	_____	_____	_____	___	
2. _____	_____	_____	_____	___	
Total Cover: _____				___	
% Bare Ground in Herb Stratum <u>10</u>				% Cover of Biotic Crust _____	

Remarks: Roughly 15 ft wide on average, Roughly 100 ft long patch of S. californicus
"Bare Ground" is water.

Sampling Point: 19 A

[illegible]

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Hydric Soil Present? Yes ☒ No ☐

- ☒ Water Marks (B1) (**Riverine**)
- ☒ Sediment Deposits (B2) (**Riverine**)
- ☒ Drift Deposits (B3) (**Riverine**)
- ☒ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Wetland Hydrology Present? Yes ☒ No ☐

Remarks: In Old River, near water line.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 2 Gates, Old River City/County: CCC Co, Hollano Tract Sampling Date: 8/4/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 19B
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N R4E, Sec 30
 Landform (hillslope, terrace, etc.): bank Local relief (concave, convex, none): convex Slope (%): 4-10
 Subregion (LRR): Med. Calif. Lat: 37°59'13" Long: 121°34'56" Datum: NAD83
 Soil Map Unit Name: Rindge Muck NWI classification: _____

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 _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____	
Remarks: <u>Ordinary high water mark evident from wrack line. other waters of Old River, between wetland emergent veg. & upland (atop the levee).</u>		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: _____ (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Total Cover: _____				
Sapling/Shrub Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: _____ Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
Total Cover: _____				
Herb Stratum				Remarks: <u>No vegetation.</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	US Army Corps of Engineers
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	Arid West – Version 11-1-2006
8. _____	_____	_____	_____	
Woody Vine Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				

SOIL

Sampling Point: 19 B

[illegible]

HYDROLOGY

Wetland Hydrology Indicators		Secondary Indicators (2 or more required)	
Primary Indicators (any one indicator is sufficient)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input checked="" type="checkbox"/> Water Marks (B1) (Riverine)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input checked="" type="checkbox"/> Sediment Deposits (B2) (Riverine)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input checked="" type="checkbox"/> Drift Deposits (B3) (Riverine)	
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)	
		<input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations:			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____		
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: <i>in other waters of Old River</i>			

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 2 Gates, Old River City/County: CCCo, Holland Tact Sampling Date: 8/4/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 19C
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N R4E Sec 30
 Landform (hillslope, terrace, etc.): River bank Local relief (concave, convex, none): convex Slope (%): 4/10
 Subregion (LRR): C-Mso. Calif. Lat: 37° 59' 13" Long: 121° 34' 56" Datum: NAD83
 Soil Map Unit Name: RND6-E Muck NWI classification: _____

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 _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: <u>On bank above Old River, between Riprap & Levee Rd.</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				Hydrophytic Vegetation Indicators: ____ Dominance Test is >50% ____ Prevalence Index is ≤3.0 ¹ ____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
Sapling/Shrub Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
Total Cover: _____				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
Herb Stratum				
1. <u>Centauria polsthialis</u>	<u>40</u>	<u>y</u>	<u>NL</u>	
2. <u>Raphanus sativa</u>	<u>10</u>		<u>NL</u>	
3. <u>Festuca arundinacea</u>	<u>10</u>		<u>FAC-</u>	
4. <u>Malva sp.</u>	<u>1</u>		<u>NL</u>	
5. <u>Blomus dianthus</u>	<u>40</u>	<u>y</u>	<u>NL</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: _____				
Woody Vine Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				

Remarks:

Sampling Point: 19C

[illegible]

Remarks: Very poor soil development, w/ disaggregated fines & gravels

Remarks: No hydro indicators observed.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 Gates/Connection Slough City/County: Bacon Island, San Joaquin Sampling Date: 9/9/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 21A
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N R4E sec22
 Landform (hillslope, terrace, etc.): ditch Local relief (concave, convex, none): concave Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 37° 59' 59" Long: 121° 31' 33" Datum: NAD 83

Soil Map Unit Name: Itano silty clay, paritally drained, 0-2% slopes NWI classification: _____
 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="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks: <u>Located in aquacultural drainage ditch alongside a field currently cultivated with sunflowers. Ditch is approximately 6 ft wide</u>					

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> % (A/B)																					
1.																									
2.																									
3.																									
4.																									
Total Cover: _____ %				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> <th></th> </tr> </thead> <tbody> <tr><td>OBL species</td><td>x 1 =</td><td>0</td></tr> <tr><td>FACW species</td><td>x 2 =</td><td>0</td></tr> <tr><td>FAC species</td><td>x 3 =</td><td>0</td></tr> <tr><td>FACU species</td><td>x 4 =</td><td>0</td></tr> <tr><td>UPL species</td><td>x 5 =</td><td>0</td></tr> <tr><td>Column Totals:</td><td>(A)</td><td>0 (B)</td></tr> </tbody> </table> Prevalence Index = B/A = _____	Total % Cover of:	Multiply by:		OBL species	x 1 =	0	FACW species	x 2 =	0	FAC species	x 3 =	0	FACU species	x 4 =	0	UPL species	x 5 =	0	Column Totals:	(A)	0 (B)
Total % Cover of:	Multiply by:																								
OBL species	x 1 =	0																							
FACW species	x 2 =	0																							
FAC species	x 3 =	0																							
FACU species	x 4 =	0																							
UPL species	x 5 =	0																							
Column Totals:	(A)	0 (B)																							
Sapling/Shrub Stratum																									
1.																									
2.																									
3.																									
4.																									
5.																									
Total Cover: _____ %																									
Herb Stratum																									
1. <u>Typha latifolia</u>	<u>45</u>	<u>Y</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.																					
2. <u>Flutnea arundinacea</u>	<u>45</u>	<u>Y</u>	<u>FAC</u>																						
3. <u>Coryza canadensis</u>	<u>5</u>		<u>FAC</u>																						
4. <u>Raphanus sativa</u>	<u>5</u>		<u>NL</u>																						
5.																									
6.																									
7.																									
8.																									
Total Cover: _____ %																									
Woody Vine Stratum																									
1.																									
2.																									
Total Cover: _____ %																									
% Bare Ground in Herb Stratum _____ % % Cover of Biotic Crust _____ %																									
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																									
Remarks: <u>Ditch has been dredged. Dredge spoils were deposited alongside ditch.</u>																									

Sampling Point: 21 A

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:			Secondary Indicators (2 or more required)	
Primary Indicators (any one indicator is sufficient)				
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)		
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)		
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)		
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Thin Muck Surface (C7)		
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)		
		<input type="checkbox"/> FAC-Neutral Test (D5)		
Field Observations:				
Surface Water Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	6-12
Water Table Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:				

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 Gates/Connection Slough City/County: Bacon Island, San Joaquin Sampling Date: 9/9/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 21B
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N, R4E sec 22
 Landform (hillslope, terrace, etc.): terrace (field) Local relief (concave, convex, none): slight convex Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 37° 59' 59" Long: 121° 31' 33" Datum: NAD 83

Soil Map Unit Name: Itano silty clay, paritally drained, 0-2% slopes NWI classification: _____
 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="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: <u>Located in fallow field upslope of ditch described in 21A.</u>					

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1.				Number of Dominant Species That Are OBL, FACW, or FAC:	<u>1</u> (A)
2.				Total Number of Dominant Species Across All Strata:	<u>2</u> (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>50</u> % (A/B)
4.				Prevalence Index worksheet:	
Sapling/Shrub Stratum				Total % Cover of:	Multiply by:
1.				OBL species	x 1 = 0
2.				FACW species	x 2 = 0
3.				FAC species	x 3 = 0
4.				FACU species	x 4 = 0
5.				UPL species	x 5 = 0
Total Cover: _____ %				Column Totals:	(A) 0 (B)
Herb Stratum				Prevalence Index = B/A = _____	
1.	<u>50</u>	<u>y</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators:	
2.	<u>45</u>	<u>y</u>	<u>NL</u>	Dominance Test is >50%	
3.	<u>5</u>	<u>y</u>	<u>NL</u>	Prevalence Index is ≤3.0 ¹	
4.				<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
5.				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
6.				¹ Indicators of hydric soil and wetland hydrology must be present.	
7.				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
8.				Remarks:	
Total Cover: _____ %					
Woody Vine Stratum					
1.					
2.					
Total Cover: _____ %					
% Bare Ground in Herb Stratum _____ % % Cover of Biotic Crust _____ %					

SOIL

Sampling Point: 218

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture ³	Remarks
	Color (moist)	%	Color (moist)	%				
0-16	10YR 2/2	99	10YR 4/6	<1	C	m	silty clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Plowed Soils (C6)
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

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:

No hydrology indicators observed.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 Gates/Connection Slough City/County: Bacon Island, San Joaquin Sampling Date: 9/9/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 22 A
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N R4E sec 22
 Landform (hillslope, terrace, etc.): slight basin Local relief (concave, convex, none): concave Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 38° 0' 0.8" Long: 121° 31' 32" Datum: NAD 83
 Soil Map Unit Name: Itano silty clay, paritally drained, 0-2% slopes NWI classification: _____

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"/>	Is the Sampled Area within a Wetland?	Yes <input 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"/>		
Remarks: <u>Vegetation is very sparse, but ≥5% cover. One plant which is a dominant, was not identifiable at this time, but is most likely a FAC species.</u>				

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66</u> % (A/B)																					
1.																									
2.																									
3.																									
4.																									
Total Cover: _____ %				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> <th></th> </tr> </thead> <tbody> <tr><td>OBL species</td><td>x 1 =</td><td>0</td></tr> <tr><td>FACW species</td><td>x 2 =</td><td>0</td></tr> <tr><td>FAC species</td><td>x 3 =</td><td>0</td></tr> <tr><td>FACU species</td><td>x 4 =</td><td>0</td></tr> <tr><td>UPL species</td><td>x 5 =</td><td>0</td></tr> <tr><td>Column Totals:</td><td>(A)</td><td>0 (B)</td></tr> </tbody> </table> Prevalence Index = B/A = _____	Total % Cover of:	Multiply by:		OBL species	x 1 =	0	FACW species	x 2 =	0	FAC species	x 3 =	0	FACU species	x 4 =	0	UPL species	x 5 =	0	Column Totals:	(A)	0 (B)
Total % Cover of:	Multiply by:																								
OBL species	x 1 =	0																							
FACW species	x 2 =	0																							
FAC species	x 3 =	0																							
FACU species	x 4 =	0																							
UPL species	x 5 =	0																							
Column Totals:	(A)	0 (B)																							
Sapling/Shrub Stratum																									
1.																									
2.																									
3.																									
4.																									
5.																									
Total Cover: _____ %																									
Herb Stratum																									
1. <u>Cyperus eragrostis</u>	<u>3</u>	<u>y</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.																					
2. <u>Polygonum arenarium</u>	<u>3</u>	<u>y</u>	<u>NL</u>																						
3. <u>Apocynum sp (?)</u>	<u>3</u>	<u>y</u>	<u>FAC</u>																						
4.																									
5.																									
6.																									
7.																									
8.																									
Total Cover: _____ %																									
Woody Vine Stratum																									
1.																									
2.																									
Total Cover: _____ %																									
% Bare Ground in Herb Stratum <u>91</u> %	% Cover of Biotic Crust _____ %																								
Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>																									
Remarks: <u>In other areas of basin, an Asclepias sp. (possibly A. cortifolia), FAC (or an Apocynum sp., possibly A. cannabinum) FAC</u>																									

SOIL

Sampling Point: 22A

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture ³	Remarks
	Color (moist)	%	Color (moist)	%				
0-16	10YR 4/2	75	5YR 5/8	25	C	M	Silty clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☒ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☒ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☒ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Plowed Soils (C6)
☒ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?

Yes ☐No ☒

Depth (inches): _____

Water Table Present?

Yes ☐No ☒

Depth (inches): _____

Saturation Present?

Yes ☐No ☒

Depth (inches): _____

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

Weak sediment deposits. Large areas of Bare Ground co-incident with break in topography. Hydrology is probably a combo. of direct precipitation, sheet flow, or live seepage

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 Gates/Connection Slough City/County: Bacon Island, San Joaquin Sampling Date: 9/9/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 228
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N R4E Sec 22
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 38° 0' 0.8" Long: 121° 31' 32" Datum: NAD 83
 Soil Map Unit Name: Itano silty clay, paritally drained, 0-2% slopes NWI classification:

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="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks:					

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1.				Number of Dominant Species That Are OBL, FACW, or FAC:	0 (A)
2.				Total Number of Dominant Species Across All Strata:	10 (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC:	0 % (A/B)
4.					
Total Cover:			%		
Prevalence Index worksheet:					
Sapling/Shrub Stratum			Total % Cover of: Multiply by:		
1.				OBL species	x 1 = 0
2.				FACW species	x 2 = 0
3.				FAC species	x 3 = 0
4.				FACU species	x 4 = 0
5.				UPL species	x 5 = 0
Total Cover:			%	Column Totals:	(A) 0 (B)
Herb Stratum			Prevalence Index = B/A =		
1.	<u>Bromus diandrus</u>	<u>15</u>	<u>4</u>	<u>NL</u>	
2.	<u>Raphanus sativa</u>	<u>10</u>		<u>NL</u>	
3.					
4.					
5.					
6.					
7.					
8.					
Total Cover:			%		
Woody Vine Stratum					
1.					
2.					
Total Cover:			%		
% Bare Ground in Herb Stratum <u>75%</u>			% Cover of Biotic Crust		

Hydrophytic Vegetation Indicators:

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0¹
- ☐ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks:

SOIL

Sampling Point: 22B

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

Depth (inches)	Matrix		Redox Features				Texture ³	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR 4/2	99	10YR 4/6	1	C	M	silty clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Vernal Pools (F9) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils:⁴

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒Remarks: No soils indicators observed

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|--|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☐ Depth (inches): _____Water Table Present? Yes ☐ No ☐ Depth (inches): _____Saturation Present? Yes ☐ No ☐ Depth (inches): _____
(includes capillary fringe)Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: No hydrology indicators observed

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 Gates/Connection Slough City/County: Bacon Island, San Joaquin Sampling Date: 9/9/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 23 A
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N R4E Sec 22
 Landform (hillslope, terrace, etc.): hummocky basin Local relief (concave, convex, none): hummock Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 38° 0' 2.4" Long: 121° 31' 33" Datum: NAD 83
 Soil Map Unit Name: Itano silty clay, paritally drained, 0-2% slopes NWI classification: _____

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="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Remarks:				

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1.				Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)		
2.				Total Number of Dominant Species Across All Strata: <u>2</u> (B)		
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> % (A/B)		
4.						
Total Cover: _____ %						
Sapling/Shrub Stratum				Prevalence Index worksheet:		
1.				Total % Cover of: Multiply by:		
2.				OBL species	x 1 =	0
3.				FACW species	x 2 =	0
4.				FAC species	x 3 =	0
5.				FACU species	x 4 =	0
Total Cover: _____ %				UPL species	x 5 =	0
Herb Stratum				Column Totals:	(A)	0 (B)
1. <u>Cynodon dactylon</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>	Prevalence Index = B/A = _____		
2. <u>Cyperus eragrostis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>			
3. <u>Vulpia bromoides</u>	<u>25</u>	<u>Y</u>	<u>FACW</u>			
4. <u>Raphanus sativa</u>	<u>5</u>		<u>NL</u>			
5.						
6.						
7.						
8.						
Total Cover: _____ %						
Woody Vine Stratum				Hydrophytic Vegetation Indicators:		
1.				<input checked="" type="checkbox"/> Dominance Test is >50%		
2.				<input type="checkbox"/> Prevalence Index is ≤3.0 ¹		
Total Cover: _____ %				<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)		
				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)		
				¹ Indicators of hydric soil and wetland hydrology must be present.		
				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks:						

SOIL

Sampling Point: 23A

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture ³	Remarks
	Color (moist)	%	Color (moist)	%				
0-16	10YR 2/1	85	5YR 4/6 5/8	15	C	M	silt loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☒ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:⁴

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☒ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Plowed Soils (C6)
☒ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

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:

other: bare grounds "scald" area. Groundwater seepage seems important here.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 Gates/Connection Slough City/County: Bacon Island, San Joaquin Sampling Date: 9/9/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 23B
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N R4E Sec 22
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): hummock Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 38° 0' 2.4" Long: 121° 31' 33" Datum: NAD 83
 Soil Map Unit Name: Itano silty clay, partially drained, 0-2% slopes NWI classification: _____

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="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: <u>Area seems to be a compacted area w/ fire tracks</u>					

VEGETATION

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

Sampling Point: 23B

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:			Secondary Indicators (2 or more required)	
Primary Indicators (any one indicator is sufficient)				
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Water Marks (B1) (Riverine)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)	
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)		<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Shallow Aquitard (D3)	
			<input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations:				
Surface Water Present?	Yes <input type="radio"/> No <input type="radio"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	
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): _____		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				
Remarks: <i>no hydrology indicators present. Compacted soils may be preventing groundwater seepage in this area.</i>				

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 Gates/Connection Slough City/County: Bacon Island, San Joaquin Sampling Date: 9/9/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 24A
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N R4E Sec 22
 Landform (hillslope, terrace, etc.): hummocky basin Local relief (concave, convex, none): slight concave Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 38° 0' 2.6" Long: 121° 31' 32.5" Datum: NAD 83
 Soil Map Unit Name: Itano silty clay, paritally drained, 0-2% slopes NWI classification: _____

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="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks:					

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC:	<u>28</u> (A)
2. _____				Total Number of Dominant Species Across All Strata:	<u>28</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100</u> % (A/B)
4. _____				Prevalence Index worksheet:	
Sapling/Shrub Stratum				Total % Cover of:	Multiply by:
1. _____				OBL species	x 1 = 0
2. _____				FACW species	x 2 = 0
3. _____				FAC species	x 3 = 0
4. _____				FACU species	x 4 = 0
5. _____				UPL species	x 5 = 0
Total Cover: _____ %				Column Totals:	(A) 0 (B)
Herb Stratum				Prevalence Index = B/A = _____	
1. <u>Vulpia bromoides</u>	<u>15</u>	<u>y</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators:	
2. <u>Cynodon dactylon</u>	<u>20</u>	<u>y</u>	<u>FAC</u>	<input checked="" type="checkbox"/> Dominance Test is >50%	
3. <u>Convolvulus arvensis</u>	<u>53</u>		<u>NL</u>	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹	
4. <u>Polygonum arenastrum</u>	<u>2</u>			<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
5. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
6. _____				¹ Indicators of hydric soil and wetland hydrology must be present.	
7. _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
8. _____					
Total Cover: _____ %					
Woody Vine Stratum					
1. _____					
2. _____					
Total Cover: _____ %					
% Bare Ground in Herb Stratum <u>60</u> %				% Cover of Biotic Crust _____ %	
Remarks:					

Sampling Point: 2C8A

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | | | |
|--------------------------|---|-------------------------------------|----------------------------|
| <input type="checkbox"/> | Histosol (A1) | <input type="checkbox"/> | Sandy Redox (S5) |
| <input type="checkbox"/> | Histic Epipedon (A2) | <input type="checkbox"/> | Stripped Matrix (S6) |
| <input type="checkbox"/> | Black Histic (A3) | <input type="checkbox"/> | Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> | Hydrogen Sulfide (A4) | <input type="checkbox"/> | Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> | Stratified Layers (A5) (LRR C) | <input type="checkbox"/> | Depleted Matrix (F3) |
| <input type="checkbox"/> | 1 cm Muck (A9) (LRR D) | <input checked="" type="checkbox"/> | Redox Dark Surface (F6) |
| <input type="checkbox"/> | Depleted Below Dark Surface (A11) | <input type="checkbox"/> | Depleted Dark Surface (F7) |
| <input type="checkbox"/> | Thick Dark Surface (A12) | <input type="checkbox"/> | Redox Depressions (F8) |
| <input type="checkbox"/> | Sandy Mucky Mineral (S1) | <input type="checkbox"/> | Vernal Pools (F9) |
| <input type="checkbox"/> | Sandy Gleyed Matrix (S4) | | |

Indicators for Problematic Hydric Soils:

- ☐ 1 cm Muck (A9) (**LRR C**)
 - ☐ 2 cm Muck (A10) (**LRR B**)
 - ☐ Reduced Vertic (F18)
 - ☐ Red Parent Material (TF2)
 - ☐ Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|---|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input checked="" type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input checked="" type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☐ No ☒ Depth (inches):

Saturation Present? Yes ☐ No ☒ Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☐

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

Remarks:

Bare areas indicative of ponding conditions

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 Gates/Connection Slough City/County: Bacon Island, San Joaquin Sampling Date: 9/9/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 24.8
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N R4E Sec22
 Landform (hillslope, terrace, etc.): hummock Local relief (concave, convex, none): convex Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 38° 0' 2.6" Long: 121° 31' 32.5" Datum: NAD 83
 Soil Map Unit Name: Itano silty clay, paritally drained, 0-2% slopes NWI classification: _____

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="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks:					

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1.				Number of Dominant Species That Are OBL, FACW, or FAC:	0 (A)
2.				Total Number of Dominant Species Across All Strata:	2 (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC:	0 % (A/B)
4.					
Total Cover: %					
Sapling/Shrub Stratum				Prevalence Index worksheet:	
1.				Total % Cover of:	Multiply by:
2.				OBL species	x 1 = 0
3.				FACW species	x 2 = 0
4.				FAC species	x 3 = 0
5.				FACU species	x 4 = 0
Total Cover: %				UPL species	x 5 = 0
				Column Totals:	(A) 0 (B)
Herb Stratum				Prevalence Index = B/A =	
1. <i>Bromus diandrus</i>	40	y	NL		
2. <i>Convolvulus arvensis</i>	30	y	NL		
3. <i>Raphanus sativa</i>	5		NL		
4. <i>Polygonum arenastrum</i>	15		NL		
5.					
6.					
7.					
8.					
Total Cover: %					
Woody Vine Stratum				Hydrophytic Vegetation Indicators:	
1.				Dominance Test is >50%	
2.				Prevalence Index is ≤3.0 ¹	
Total Cover: %				<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
				¹ Indicators of hydric soil and wetland hydrology must be present.	
% Bare Ground in Herb Stratum <u>10</u> %	% Cover of Biotic Crust			Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Remarks:

Sampling Point: 24B

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:			Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)			
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <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)	<input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <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)	
Field Observations:			
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): _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: <i>no hydrology indicators present</i>			

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 Gates/Connection Slough City/County: Bacon Island, San Joaquin Sampling Date: 9/9/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 25A
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N R4E sec 22
 Landform (hillslope, terrace, etc.): basin Local relief (concave, convex, none): concave Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 38° 0' 2.6" Long: 121° 31' 31.5" Datum: NAD 83

Soil Map Unit Name: Itano silty clay, partially drained, 0-2% slopes NWI classification: _____
 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="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks:					

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1.				Number of Dominant Species That Are OBL, FACW, or FAC: <u>10</u> (A)		
2.				Total Number of Dominant Species Across All Strata: <u>10</u> (B)		
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> % (A/B)		
4.						
Total Cover: _____ %						
Sapling/Shrub Stratum				Prevalence Index worksheet:		
1.				Total % Cover of: _____ Multiply by: _____		
2.				OBL species	x 1 =	0
3.				FACW species	x 2 =	0
4.				FAC species	x 3 =	0
5.				FACU species	x 4 =	0
Total Cover: _____ %				UPL species	x 5 =	0
				Column Totals:	(A)	0 (B)
				Prevalence Index = B/A = _____		
Herb Stratum				Hydrophytic Vegetation Indicators:		
1. <u>Vulpia bromoides</u>	<u>80</u>	<u>y</u>	<u>FACW</u>	<input checked="" type="checkbox"/> Dominance Test is >50%		
2. <u>Hordeum maritimum</u>	<u>10</u>		<u>NI</u>	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹		
3.				<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)		
4.				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)		
5.						
6.						
7.						
8.						
Total Cover: _____ %				¹ Indicators of hydric soil and wetland hydrology must be present.		
Woody Vine Stratum				Hydrophytic Vegetation Present?		
1.				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
2.						
Total Cover: _____ %						
% Bare Ground in Herb Stratum <u>10</u> % % Cover of Biotic Crust _____ %						

Remarks: Vegetation community is naturally problematic. Strong thatch layer of Vulpia bromoides & Hordeum maritimum. Currently, in driest part of year, dominant is Convolvulus arvensis. There has been a seasonal community shift to upland spp. Some Raphanus sativa and Cirsium vulgare present.

SOIL

Sampling Point: 25A

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | | | |
|--------------------------|---|-------------------------------------|----------------------------|
| <input type="checkbox"/> | Histosol (A1) | <input type="checkbox"/> | Sandy Redox (S5) |
| <input type="checkbox"/> | Histic Epipedon (A2) | <input type="checkbox"/> | Stripped Matrix (S6) |
| <input type="checkbox"/> | Black Histic (A3) | <input type="checkbox"/> | Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> | Hydrogen Sulfide (A4) | <input type="checkbox"/> | Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> | Stratified Layers (A5) (LRR C) | <input type="checkbox"/> | Depleted Matrix (F3) |
| <input type="checkbox"/> | 1 cm Muck (A9) (LRR D) | <input checked="" type="checkbox"/> | Redox Dark Surface (F6) |
| <input type="checkbox"/> | Depleted Below Dark Surface (A11) | <input type="checkbox"/> | Depleted Dark Surface (F7) |
| <input type="checkbox"/> | Thick Dark Surface (A12) | <input type="checkbox"/> | Redox Depressions (F8) |
| <input type="checkbox"/> | Sandy Mucky Mineral (S1) | <input type="checkbox"/> | Vernal Pools (F9) |
| <input type="checkbox"/> | Sandy Gleyed Matrix (S4) | | |

Indicators for Problematic Hydric Soils:

- ☐ 1 cm Muck (A9) (**LRR C**)
☐ 2 cm Muck (A10) (**LRR B**)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks: Very strong redox

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☐ No ☒ Depth (inches):

Saturation Present? Yes ☐ No ☒ Depth (inches):
(includes capillary fringe)

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: 2 Gates/Connection Slough City/County: Bacon Island, San Joaquin Sampling Date: 9/9/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 25 B
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N R4E sec 22
 Landform (hillslope, terrace, etc.): hummock Local relief (concave, convex, none): convex Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 38° 0' 2.6" Long: 121° 31' 31.5" Datum: NAD 83
 Soil Map Unit Name: Itano silty clay, paritally drained, 0-2% slopes NWI classification:

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="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks:					

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>10</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> % (A/B)																					
1.																									
2.																									
3.																									
4.																									
Total Cover: <u> </u> %				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> <th></th> </tr> </thead> <tbody> <tr><td>OBL species</td><td>x 1 =</td><td><u>0</u></td></tr> <tr><td>FACW species</td><td>x 2 =</td><td><u>0</u></td></tr> <tr><td>FAC species</td><td>x 3 =</td><td><u>0</u></td></tr> <tr><td>FACU species</td><td>x 4 =</td><td><u>0</u></td></tr> <tr><td>UPL species</td><td>x 5 =</td><td><u>0</u></td></tr> <tr><td>Column Totals:</td><td>(A)</td><td><u>0</u> (B)</td></tr> </tbody> </table> Prevalence Index = B/A = <u> </u>	Total % Cover of:	Multiply by:		OBL species	x 1 =	<u>0</u>	FACW species	x 2 =	<u>0</u>	FAC species	x 3 =	<u>0</u>	FACU species	x 4 =	<u>0</u>	UPL species	x 5 =	<u>0</u>	Column Totals:	(A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																								
OBL species	x 1 =	<u>0</u>																							
FACW species	x 2 =	<u>0</u>																							
FAC species	x 3 =	<u>0</u>																							
FACU species	x 4 =	<u>0</u>																							
UPL species	x 5 =	<u>0</u>																							
Column Totals:	(A)	<u>0</u> (B)																							
Total Cover: <u> </u> %																									
Sapling/Shrub Stratum																									
1.																									
2.																									
3.																									
4.																									
5.																									
Total Cover: <u> </u> %																									
Herb Stratum																									
1. <u>Raphanus sativa</u>	<u>95</u>	<u>y</u>	<u>NL</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.																					
2.																									
3.																									
4.																									
5.																									
6.																									
7.																									
8.																									
Total Cover: <u> </u> %																									
Woody Vine Stratum																									
1.																									
2.																									
Total Cover: <u> </u> %																									
% Bare Ground in Herb Stratum <u>5</u> %	% Cover of Biotic Crust <u> </u> %			Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																					

Remarks: Late Season vegetation community shift from R. sativa to Convolvulus arvensis. C. arvensis is current dominant at 60%, 40% Thatch.

SOIL

Sampling Point: 25B

[illegible]

HYDROLOGY

Wetland Hydrology Indicators			Secondary Indicators (2 or more required)		
Primary Indicators (any one indicator is sufficient)					
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Water Marks (B1) (Riverine)		
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)		
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)		
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Thin Muck Surface (C7)		
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)		<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Shallow Aquitard (D3)		
			<input type="checkbox"/> FAC-Neutral Test (D5)		
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?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):			
(includes capillary fringe)			Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 Gates/Connection Slough City/County: Bacon Island, San Joaquin Sampling Date: 9/9/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 26
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N R4E Sec 22
 Landform (hillslope, terrace, etc.): field Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 38° 0' 6.36" Long: 121° 31' 31" Datum: NAD 83
 Soil Map Unit Name: Itano silty clay, paritally drained, 0-2% slopes NWI classification: _____

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="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: <u>Situated in fallow aquacultural field, nearby an active ground squirrel colony.</u>					

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1.				Number of Dominant Species That Are OBL, FACW, or FAC:	0 (A)
2.				Total Number of Dominant Species Across All Strata:	2* (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC:	0 % (A/B)
4.					
Total Cover: %					
Sapling/Shrub Stratum				Prevalence Index worksheet:	
1.				Total % Cover of:	Multiply by:
2.				OBL species	x 1 = 0
3.				FACW species	x 2 = 0
4.				FAC species	x 3 = 0
5.				FACU species	x 4 = 0
Total Cover: %				UPL species	x 5 = 0
				Column Totals:	(A) 0 (B)
Herb Stratum				Prevalence Index = B/A =	
1. <u>Bromus diandrus</u>	55	y	NL		
2. <u>Convolvulus arvensis</u>	20	y	NL		
3. <u>Hirschfeldia incana</u>	15		NL		
4. <u>Raphanus sativa</u>	5		NL		
5.					
6.					
7.					
8.					
Total Cover: %					
Woody Vine Stratum				Hydrophytic Vegetation Indicators:	
1.				<input type="checkbox"/> Dominance Test is >50%	
2.				<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
Total Cover: %				<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
				¹ Indicators of hydric soil and wetland hydrology must be present.	
				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
% Bare Ground in Herb Stratum <u>5</u> % % Cover of Biotic Crust %					
Remarks:					

SOIL

Sampling Point: 26

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture ³	Remarks
	Color (moist)	%	Color (moist)	%				
0-16	10YR 3/2	99	10YR 4/6	1	C	M	silty clay loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Vernal Pools (F9) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils:

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Remarks: _____

Hydric Soil Present? Yes ☐ No ☒

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|--|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

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:

No hydrology indicators observed.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 Gates/Connection Slough City/County: Bacon Island, San Joaquin Sampling Date: 9/9/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 27 A
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N R4E sec 22
 Landform (hillslope, terrace, etc.): ditch Local relief (concave, convex, none): concave Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 38° 0' 9.8" Long: 121° 31' 41" Datum: NAD 83
 Soil Map Unit Name: Itano silty clay, paritally drained, 0-2% slopes NWI classification: _____

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="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Remarks: <u>Vegetation has been removed from ditch. Ditch averages 5 feet in width.</u>			

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>20</u> (A) Total Number of Dominant Species Across All Strata: <u>20</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> % (A/B)																					
1.																									
2.																									
3.																									
4.																									
Total Cover: _____ %				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> <th></th> </tr> </thead> <tbody> <tr><td>OBL species</td><td>x 1 =</td><td>0</td></tr> <tr><td>FACW species</td><td>x 2 =</td><td>0</td></tr> <tr><td>FAC species</td><td>x 3 =</td><td>0</td></tr> <tr><td>FACU species</td><td>x 4 =</td><td>0</td></tr> <tr><td>UPL species</td><td>x 5 =</td><td>0</td></tr> <tr><td>Column Totals:</td><td>(A)</td><td>0 (B)</td></tr> </tbody> </table> Prevalence Index = B/A = _____	Total % Cover of:	Multiply by:		OBL species	x 1 =	0	FACW species	x 2 =	0	FAC species	x 3 =	0	FACU species	x 4 =	0	UPL species	x 5 =	0	Column Totals:	(A)	0 (B)
Total % Cover of:	Multiply by:																								
OBL species	x 1 =	0																							
FACW species	x 2 =	0																							
FAC species	x 3 =	0																							
FACU species	x 4 =	0																							
UPL species	x 5 =	0																							
Column Totals:	(A)	0 (B)																							
Sapling/Shrub Stratum																									
1.																									
2.																									
3.																									
4.																									
5.																									
Total Cover: _____ %																									
Herb Stratum																									
1. <u>Typha latifolia</u>	<u>10</u>	<u>y</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)																					
2. <u>Polygonum hydropiperoides</u>	<u>15</u>	<u>y</u>	<u>OBL</u>																						
3. <u>Urtica dioica</u>	<u>5</u>		<u>FACW</u>																						
4.																									
5.																									
6.																									
7.																									
8.																									
Total Cover: _____ %																									
Woody Vine Stratum																									
1.																									
2.																									
Total Cover: _____ %																									
% Bare Ground in Herb Stratum <u>70</u> %	% Cover of Biotic Crust _____ %			Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																					
Remarks: <u>Recently dredged ditch formerly supported more typha & polygonum.</u>																									

Sampling Point: 27A

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils:⁴

- | | | | | | |
|--------------------------|---|-------------------------------------|----------------------------|--------------------------|----------------------------------|
| <input type="checkbox"/> | Histosol (A1) | <input type="checkbox"/> | Sandy Redox (S5) | <input type="checkbox"/> | 1 cm Muck (A9) (LRR C) |
| <input type="checkbox"/> | Histic Epipedon (A2) | <input type="checkbox"/> | Stripped Matrix (S6) | <input type="checkbox"/> | 2 cm Muck (A10) (LRR B) |
| <input type="checkbox"/> | Black Histic (A3) | <input type="checkbox"/> | Loamy Mucky Mineral (F1) | <input type="checkbox"/> | Reduced Vertic (F18) |
| <input type="checkbox"/> | Hydrogen Sulfide (A4) | <input type="checkbox"/> | Loamy Gleyed Matrix (F2) | <input type="checkbox"/> | Red Parent Material (TF2) |
| <input type="checkbox"/> | Stratified Layers (A5) (LRR C) | <input type="checkbox"/> | Depleted Matrix (F3) | <input type="checkbox"/> | Other (Explain in Remarks) |
| <input type="checkbox"/> | 1 cm Muck (A9) (LRR D) | <input checked="" type="checkbox"/> | Redox Dark Surface (F6) | | |
| <input type="checkbox"/> | Depleted Below Dark Surface (A11) | <input type="checkbox"/> | Depleted Dark Surface (F7) | | |
| <input type="checkbox"/> | Thick Dark Surface (A12) | <input type="checkbox"/> | Redox Depressions (F8) | | |
| <input type="checkbox"/> | Sandy Mucky Mineral (S1) | <input type="checkbox"/> | Vernal Pools (F9) | | |
| <input type="checkbox"/> | Sandy Gleyed Matrix (S4) | | | | |
- *Indicators of hydrophytic vegetation and/or wetland hydrology must be present

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 4

Water Table Present? Yes ☒ No ☐ Depth (inches):

Saturation Present? 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: 2 Gates/Connection Slough City/County: Bacon Island, San Joaquin Sampling Date: 9/9/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 27-B
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N R4E Sec 22
 Landform (hillslope, terrace, etc.): terrace/field Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 38° 0' 9.8" Long: 121° 31' 41" Datum: NAD 83
 Soil Map Unit Name: Itano silty clay, paritally drained, 0-2% slopes NWI classification:

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"/>	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:					

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>10</u> (A) Total Number of Dominant Species Across All Strata: <u>10</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> % (A/B)																					
1.																									
2.																									
3.																									
4.																									
Total Cover: <u> </u> %				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> <th></th> </tr> </thead> <tbody> <tr><td>OBL species</td><td>x 1 =</td><td><u>0</u></td></tr> <tr><td>FACW species</td><td>x 2 =</td><td><u>0</u></td></tr> <tr><td>FAC species</td><td>x 3 =</td><td><u>0</u></td></tr> <tr><td>FACU species</td><td>x 4 =</td><td><u>0</u></td></tr> <tr><td>UPL species</td><td>x 5 =</td><td><u>0</u></td></tr> <tr><td>Column Totals:</td><td>(A)</td><td><u>0</u> (B)</td></tr> </tbody> </table> Prevalence Index = B/A = <u> </u>	Total % Cover of:	Multiply by:		OBL species	x 1 =	<u>0</u>	FACW species	x 2 =	<u>0</u>	FAC species	x 3 =	<u>0</u>	FACU species	x 4 =	<u>0</u>	UPL species	x 5 =	<u>0</u>	Column Totals:	(A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																								
OBL species	x 1 =	<u>0</u>																							
FACW species	x 2 =	<u>0</u>																							
FAC species	x 3 =	<u>0</u>																							
FACU species	x 4 =	<u>0</u>																							
UPL species	x 5 =	<u>0</u>																							
Column Totals:	(A)	<u>0</u> (B)																							
Total Cover: <u> </u> %																									
Sapling/Shrub Stratum																									
1.																									
2.																									
3.																									
4.																									
5.																									
Total Cover: <u> </u> %																									
Herb Stratum																									
1. <u>Cynodon dactylon</u>	<u>100</u>	<u>Y</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.																					
2.																									
3.																									
4.																									
5.																									
6.																									
7.																									
8.																									
Total Cover: <u> </u> %																									
Woody Vine Stratum																									
1.																									
2.																									
Total Cover: <u> </u> %																									
% Bare Ground in Herb Stratum <u> </u> %	% Cover of Biotic Crust <u> </u> %			Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>																					

Remarks: Spots from ditch dredging also present, containing T. latifolia litter.

SOIL

Sampling Point: 278

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

Depth (inches)	Matrix		Redox Features				Texture ³	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10 yr 2/1	100	—	0	—	—	silt loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Vernal Pools (F9) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils:⁴

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|--|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☐ Depth (inches): _____Water Table Present? Yes ☐ No ☐ Depth (inches): _____Saturation Present? Yes ☐ No ☐ Depth (inches): _____
(includes capillary fringe)Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

No hydrology indicators present.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 Gates/Connection Slough City/County: Bacon Island, San Joaquin Sampling Date: 9/9/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 28A
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N R4E sec 22
 Landform (hillslope, terrace, etc.): hillslope/levee Local relief (concave, convex, none): concave Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 38° 0' 10.8" Long: 121° 31' 39" Datum: NAD 83

Soil Map Unit Name: Itano silty clay, paritally drained, 0-2% slopes NWI classification: _____
 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="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks: <u>Freshwater marsh. Poor soil development - see soil section.</u>					

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>10</u> (A) Total Number of Dominant Species Across All Strata: <u>10</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> % (A/B)																					
1.																									
2.																									
3.																									
4.																									
Total Cover: _____ %				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> <th></th> </tr> </thead> <tbody> <tr><td>OBL species</td><td>x 1 =</td><td>0</td></tr> <tr><td>FACW species</td><td>x 2 =</td><td>0</td></tr> <tr><td>FAC species</td><td>x 3 =</td><td>0</td></tr> <tr><td>FACU species</td><td>x 4 =</td><td>0</td></tr> <tr><td>UPL species</td><td>x 5 =</td><td>0</td></tr> <tr><td>Column Totals:</td><td>(A)</td><td>0 (B)</td></tr> </tbody> </table> Prevalence Index = B/A = _____	Total % Cover of:	Multiply by:		OBL species	x 1 =	0	FACW species	x 2 =	0	FAC species	x 3 =	0	FACU species	x 4 =	0	UPL species	x 5 =	0	Column Totals:	(A)	0 (B)
Total % Cover of:	Multiply by:																								
OBL species	x 1 =	0																							
FACW species	x 2 =	0																							
FAC species	x 3 =	0																							
FACU species	x 4 =	0																							
UPL species	x 5 =	0																							
Column Totals:	(A)	0 (B)																							
Sapling/Shrub Stratum 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: _____ %																									
Herb Stratum 1. <u>Sarcobatus californicus</u> <u>90</u> <u>y</u> <u>OBL</u> 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ Total Cover: _____ %																									
Woody Vine Stratum 1. _____ 2. _____ Total Cover: _____ %																									
% Bare Ground in Herb Stratum <u>10</u> % % Cover of Biotic Crust _____ %																									
Remarks: <u>↓ water</u> <u>Sch. californicus goes right to edge of levee.</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																					

Sampling Point: 28A

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | | | |
|--------------------------|---|--------------------------|----------------------------|
| <input type="checkbox"/> | Histosol (A1) | <input type="checkbox"/> | Sandy Redox (S5) |
| <input type="checkbox"/> | Histic Epipedon (A2) | <input type="checkbox"/> | Stripped Matrix (S6) |
| <input type="checkbox"/> | Black Histic (A3) | <input type="checkbox"/> | Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> | Hydrogen Sulfide (A4) | <input type="checkbox"/> | Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> | Stratified Layers (A5) (LRR C) | <input type="checkbox"/> | Depleted Matrix (F3) |
| <input type="checkbox"/> | 1 cm Muck (A9) (LRR D) | <input type="checkbox"/> | Redox Dark Surface (F6) |
| <input type="checkbox"/> | Depleted Below Dark Surface (A11) | <input type="checkbox"/> | Depleted Dark Surface (F7) |
| <input type="checkbox"/> | Thick Dark Surface (A12) | <input type="checkbox"/> | Redox Depressions (F8) |
| <input type="checkbox"/> | Sandy Mucky Mineral (S1) | <input type="checkbox"/> | Vernal Pools (F9) |
| <input type="checkbox"/> | Sandy Gleyed Matrix (S4) | | |

Indicators for Problematic Hydric Soils:

- ☐ 1 cm Muck (A9) (**LRR C**)

☐ 2 cm Muck (A10) (**LRR B**)

☐ Reduced Vertic (F18)

☐ Red Parent Material (TF2)

☐ Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks: mixture of soil & riprap, unable to sample soil, no true soil profile has developed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | | | |
|-------------------------------------|---|--------------------------|---|
| <input checked="" type="checkbox"/> | Surface Water (A1) | <input type="checkbox"/> | Salt Crust (B11) |
| <input type="checkbox"/> | High Water Table (A2) | <input type="checkbox"/> | Biotic Crust (B12) |
| <input type="checkbox"/> | Saturation (A3) | <input type="checkbox"/> | Aquatic Invertebrates (B13) |
| <input type="checkbox"/> | Water Marks (B1) (Nonriverine) | <input type="checkbox"/> | Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> | Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> | Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> | Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> | Presence of Reduced Iron (C4) |
| <input type="checkbox"/> | Surface Soil Cracks (B6) | <input type="checkbox"/> | Recent Iron Reduction in Plowed Soils (C6) |
| <input type="checkbox"/> | Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> | Other (Explain in Remarks) |
| <input type="checkbox"/> | Water-Stained Leaves (B9) | | |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): ~38

Water Table Present? Yes ☐ No ☐ Depth (inches): _____

Saturation Present? Yes ☐ No ☐ Depth (inches): _____
(includes capillary fringe)

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: 2 Gates/Connection Slough City/County: Bacon Island, San Joaquin Sampling Date: 9/9/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 28B
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N R4E Sec 22
 Landform (hillslope, terrace, etc.): hillslope/levee Local relief (concave, convex, none): convex Slope (%): 5-10
 Subregion (LRR): C - Mediterranean California Lat: 38° 0' 10.8" Long: 121° 31' 39" Datum: NAD 83
 Soil Map Unit Name: Itano silty clay, partially drained, 0-2% slopes NWI classification: _____

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:					

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)		
2. _____				Total Number of Dominant Species Across All Strata: <u>20</u> (B)		
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> % (A/B)		
4. _____						
Total Cover: _____ %						
Sapling/Shrub Stratum				Prevalence Index worksheet:		
1. _____				Total % Cover of: _____ Multiply by:		
2. _____				OBL species	x 1 =	<u>0</u>
3. _____				FACW species	x 2 =	<u>0</u>
4. _____				FAC species	x 3 =	<u>0</u>
5. _____				FACU species	x 4 =	<u>0</u>
Total Cover: _____ %				UPL species	x 5 =	<u>0</u>
				Column Totals:	(A)	<u>0</u> (B)
				Prevalence Index = B/A = _____		
Herb Stratum				Hydrophytic Vegetation Indicators:		
1. <u>Cynodon dactylon</u>	<u>45</u>	<u>y</u>	<u>FAC</u>	<input checked="" type="checkbox"/> Dominance Test is >50%		
2. <u>Carduus pycnocephalus</u>	<u>45</u>	<u>y</u>	<u>NL</u>	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹		
3. <u>Conyza canadensis</u>	<u>5</u>		<u>FAC</u>	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)		
4. <u>Cirsium vulgare</u>	<u>5</u>		<u>NL</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)		
5. _____						
6. _____						
7. _____						
8. _____						
Total Cover: _____ %						
Woody Vine Stratum				¹ Indicators of hydric soil and wetland hydrology must be present.		
1. _____						
2. _____						
Total Cover: _____ %						
% Bare Ground in Herb Stratum _____ % % Cover of Biotic Crust _____ %				Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/>		

Remarks:

SOIL

Sampling Point: 28 P

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils:⁴

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

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches):

Hydric Soil Present? Yes ☐ No ☐

Remarks:

marks: No true soil development, but a conglomerate of gravel & soil used to construct levee.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|--|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) **(Riverine)**
- ☐ Sediment Deposits (B2) **(Riverine)**
- ☐ Drift Deposits (B3) **(Riverine)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☐ No ☐ Depth (inches):

Saturation Present? Yes ☐ No ☐ Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

No hydrology indicators present.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 2 Gates/Connection Slough City/County: Bacon Island, San Joaquin Sampling Date: 9/9/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 29 A
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N R4E S22
 Landform (hillslope, terrace, etc.): levee/Connection Sl. Local relief (concave, convex, none): Concave Slope (%): 0-2
 Subregion (LRR): C - Mediterranean California Lat: 38° 0' 8.6" Long: 121° 31' 29" Datum: NAD 83
 Soil Map Unit Name: Itano silty clay, paritally drained, 0-2% slopes NWI classification: _____

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="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Remarks: <u>Freshwater marsh. No true soil development- mix of rip rap & soil see soil section remarks. Marsh continues to wrack line. a couple (1-2) feet of bare rip rap in some areas, but we are including</u>			

VEGETATION Bare areas as Freshwater marsh.

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>10</u> (A) Total Number of Dominant Species Across All Strata: <u>10</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> % (A/B)																					
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2.																									
3.																									
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Total % Cover of:	Multiply by:																								
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FACW species	x 2 =	<u>0</u>																							
FAC species	x 3 =	<u>0</u>																							
FACU species	x 4 =	<u>0</u>																							
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Column Totals:	(A)	<u>0</u> (B)																							
Sapling/Shrub Stratum																									
1.																									
2.																									
3.																									
4.																									
5.																									
Total Cover: _____ %																									
Herb Stratum																									
1. <u>Scirpus californicus</u>	<u>90</u>	<u>y</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.																					
2.																									
3.																									
4.																									
5.																									
6.																									
7.																									
8.																									
Total Cover: _____ %																									
Woody Vine Stratum																									
1.																									
2.																									
Total Cover: _____ %																									
% Bare Ground in Herb Stratum <u>10</u> %	% Cover of Biotic Crust _____ %																								

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: water.

Sampling Point: 29A

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | | | |
|--------------------------|---|--------------------------|----------------------------|
| <input type="checkbox"/> | Histosol (A1) | <input type="checkbox"/> | Sandy Redox (S5) |
| <input type="checkbox"/> | Histic Epipedon (A2) | <input type="checkbox"/> | Stripped Matrix (S6) |
| <input type="checkbox"/> | Black Histic (A3) | <input type="checkbox"/> | Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> | Hydrogen Sulfide (A4) | <input type="checkbox"/> | Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> | Stratified Layers (A5) (LRR C) | <input type="checkbox"/> | Depleted Matrix (F3) |
| <input type="checkbox"/> | 1 cm Muck (A9) (LRR D) | <input type="checkbox"/> | Redox Dark Surface (F6) |
| <input type="checkbox"/> | Depleted Below Dark Surface (A11) | <input type="checkbox"/> | Depleted Dark Surface (F7) |
| <input type="checkbox"/> | Thick Dark Surface (A12) | <input type="checkbox"/> | Redox Depressions (F8) |
| <input type="checkbox"/> | Sandy Mucky Mineral (S1) | <input type="checkbox"/> | Vernal Pools (F9) |
| <input type="checkbox"/> | Sandy Gleyed Matrix (S4) | | |

Indicators for Problematic Hydric Soils:

- ☐ 1 cm Muck (A9) (**LRR C**)
☐ 2 cm Muck (A10) (**LRR B**)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks: No true soil development. The tubes are growing in and among the riprap. Unable to sample soil with a pit.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | | | |
|-------------------------------------|---|--------------------------|---|
| <input checked="" type="checkbox"/> | Surface Water (A1) | <input type="checkbox"/> | Salt Crust (B11) |
| <input type="checkbox"/> | High Water Table (A2) | <input type="checkbox"/> | Biotic Crust (B12) |
| <input type="checkbox"/> | Saturation (A3) | <input type="checkbox"/> | Aquatic Invertebrates (B13) |
| <input type="checkbox"/> | Water Marks (B1) (Nonriverine) | <input type="checkbox"/> | Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> | Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> | Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> | Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> | Presence of Reduced Iron (C4) |
| <input type="checkbox"/> | Surface Soil Cracks (B6) | <input type="checkbox"/> | Recent Iron Reduction in Plowed Soils (C6) |
| <input type="checkbox"/> | Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> | Other (Explain in Remarks) |
| <input type="checkbox"/> | Water-Stained Leaves (B9) | | |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): _____

Water Table Present? Yes ☐ No ☐ Depth (inches): _____

Saturation Present? Yes ☐ No ☐ Depth (inches): _____
(includes capillary fringe)

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: 2 Gates/Connection Slough City/County: Bacon Island, San Joaquin Sampling Date: 9/9/08
 Applicant/Owner: Contra Costa Water District State: CA Sampling Point: 29B
 Investigator(s): T. Mahony, A. Richey Section, Township, Range: T2N R4E Sec 22
 Landform (hillslope, terrace, etc.): levee/hillslope Local relief (concave, convex, none): convex Slope (%): 5-10
 Subregion (LRR): C - Mediterranean California Lat: 38° 0' 8.6" Long: 121° 31' 29" Datum: NAD 83
 Soil Map Unit Name: Itano silty clay, partially drained, 0-2% slopes NWI classification: _____

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

Remarks: No true soil development, see remarks for soils section.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC:	<u>10</u> (A)
2. _____				Total Number of Dominant Species Across All Strata:	<u>20</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>50</u> % (A/B)
4. _____					
Total Cover: _____ %					
Sapling/Shrub Stratum				Prevalence Index worksheet:	
1. _____				Total % Cover of:	Multiply by:
2. _____				OBL species	x 1 = <u>0</u>
3. _____				FACW species	x 2 = <u>0</u>
4. _____				FAC species	x 3 = <u>0</u>
5. _____				FACU species	x 4 = <u>0</u>
Total Cover: _____ %				UPL species	x 5 = <u>0</u>
				Column Totals:	(A) <u>0</u> (B)
Herb Stratum				Prevalence Index = B/A = _____	
1. <u>Artemisia douglasiana</u>	<u>50</u>	<u>4</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators:	
2. <u>Cordune pycnocephalus</u>	<u>25</u>	<u>4</u>	<u>NL</u>	<input checked="" type="checkbox"/> Dominance Test is >50%	
3. <u>Hirschfeldia incana</u>	<u>10</u>			<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹	
4. _____				<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
5. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
6. _____				¹ Indicators of hydric soil and wetland hydrology must be present.	
7. _____					
8. _____					
Total Cover: _____ %					
Woody Vine Stratum				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
1. _____					
2. _____					
Total Cover: _____ %					
% Bare Ground in Herb Stratum <u>15</u> %	% Cover of Biotic Crust _____ %				

Remarks:

Sampling Point: 29B

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | | | |
|--------------------------|---|--------------------------|----------------------------|
| <input type="checkbox"/> | Histosol (A1) | <input type="checkbox"/> | Sandy Redox (S5) |
| <input type="checkbox"/> | Histic Epipedon (A2) | <input type="checkbox"/> | Stripped Matrix (S6) |
| <input type="checkbox"/> | Black Histic (A3) | <input type="checkbox"/> | Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> | Hydrogen Sulfide (A4) | <input type="checkbox"/> | Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> | Stratified Layers (A5) (LRR C) | <input type="checkbox"/> | Depleted Matrix (F3) |
| <input type="checkbox"/> | 1 cm Muck (A9) (LRR D) | <input type="checkbox"/> | Redox Dark Surface (F6) |
| <input type="checkbox"/> | Depleted Below Dark Surface (A11) | <input type="checkbox"/> | Depleted Dark Surface (F7) |
| <input type="checkbox"/> | Thick Dark Surface (A12) | <input type="checkbox"/> | Redox Depressions (F8) |
| <input type="checkbox"/> | Sandy Mucky Mineral (S1) | <input type="checkbox"/> | Vernal Pools (F9) |
| <input type="checkbox"/> | Sandy Gleyed Matrix (S4) | | |

Indicators for Problematic Hydric Soils:

- ☐ 1 cm Muck (A9) (**LRR C**)

☐ 2 cm Muck (A10) (**LRR B**)

☐ Reduced Vertic (F18)

☐ Red Parent Material (TF2)

☐ Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☐ No ☒

Remarks: "Soils" are a conglomerate of gravels, rip rap, and soil forming the levee. No true soils development.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|--|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

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: No hydrology indicators observed.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Connection Slough City/County: Bacon Island, San Joaquin Sampling Date: 9/29/08
 Applicant/Owner: CONTRA COSTA WATER DISTRICT State: CA Sampling Point: 36a
 Investigator(s): T. Mahoney Section, Township, Range: T2N, R4E, S22
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): concave ditch Slope (%): 1
 Subregion (LRR): C - Mediterranean California Lat: 38° 0' 10" N Long: 121° 31' 44" W Datum: NAD83
 Soil Map Unit Name: RIDGE MUCK, PART. DRAINAGE, 0-27 NWI classification: _____
 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.) SEASONAL NOT

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: <u>located in a man-made ditch, 4' wide</u> <u>* Ditch has been recently dredged and is mostly devoid of</u> <u>veg. Plants easily identified in dredge spoils.</u>		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66</u> % (A/B)																					
1.																									
2.																									
3.																									
4.																									
Sapling/Shrub Stratum				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> <th></th> </tr> </thead> <tbody> <tr><td>OBL species</td><td>x 1 =</td><td>0</td></tr> <tr><td>FACW species</td><td>x 2 =</td><td>0</td></tr> <tr><td>FAC species</td><td>x 3 =</td><td>0</td></tr> <tr><td>FACU species</td><td>x 4 =</td><td>0</td></tr> <tr><td>UPL species</td><td>x 5 =</td><td>0</td></tr> <tr><td>Column Totals:</td><td>(A)</td><td>0 (B)</td></tr> </tbody> </table> Prevalence Index = B/A = _____	Total % Cover of:	Multiply by:		OBL species	x 1 =	0	FACW species	x 2 =	0	FAC species	x 3 =	0	FACU species	x 4 =	0	UPL species	x 5 =	0	Column Totals:	(A)	0 (B)
Total % Cover of:	Multiply by:																								
OBL species	x 1 =	0																							
FACW species	x 2 =	0																							
FAC species	x 3 =	0																							
FACU species	x 4 =	0																							
UPL species	x 5 =	0																							
Column Totals:	(A)	0 (B)																							
1.																									
2.																									
3.																									
4.																									
Total Cover: _____ %																									
Herb Stratum				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.																					
1.	<u>Cynodon dactylon</u>	<u>20</u>	<u>Y</u> <u>FAC</u>																						
2.	<u>Typha latifolia</u>	<u>10*</u>	<u>Y</u> <u>OBL</u>																						
3.	<u>Festuca arundinacea</u>	<u>5</u>	<u>N</u> <u>FAC-</u>																						
4.																									
5.																									
6.																									
7.																									
Total Cover: <u>35</u> %																									
Woody Vine Stratum																									
1.																									
2.																									
Total Cover: <u>35</u> %																									
% Bare Ground in Herb Stratum <u>65</u> % % Cover of Biotic Crust <u>0</u> %																									
Remarks: <u>* Ditch has been dredged, and Typha latifolia is a significant</u> <u>part of spoils. It was a dominant species prior to dredging</u> <u>and is considered dominant here, even though</u> <u>present cover is only 10%</u>																									

SOIL

Sampling Point: 36A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix		Redox Features			Type ¹	Loc ²	Texture ³	Remarks
	Color (moist)	%	Color (moist)	%					
0-20	10YR2/1	95	10YR7/6	5		C	M	clay/muck	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	Indicators for Problematic Hydric Soils:⁴ <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):
 Type: None
 Depth (inches): ↓

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)	
Primary Indicators (any one indicator is sufficient)					
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)			
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)			
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)			
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input checked="" type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Thin Muck Surface (C7)			
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)			
		<input type="checkbox"/> FAC-Neutral Test (D5)			
Field Observations:					
Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>10</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>0</u>		
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>0</u>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
<u>None</u>					
Remarks: <u>located in man-made drainage ditch.</u>					

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Connection Slough City/County: BACON ISLAND, SAN JOAQUIN Sampling Date: 9/27/08
 Applicant/Owner: CONTRA COSTA WATER DISTRICT State: CA Sampling Point: 36B
 Investigator(s): T. Mahon Section, Township, Range: T2N, 24E, S22
 Landform (hillslope, terrace, etc.): TERRACE Local relief (concave, convex, none): FLAT Slope (%): 0
 Subregion (LRR): C - Mediterranean California Lat: 38° 0' 10" W Long: 121° 31' 44" W Datum: NAD83
 Soil Map Unit Name: PINDGE MUCK, PART. DAMAGED, 0-2' 70 NWI classification: _____

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.) SEASONAL WETLAND

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

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

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> % (A/B)																					
1.																									
2.																									
3.																									
4.																									
Sapling/Shrub Stratum				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> <th></th> </tr> </thead> <tbody> <tr><td>OBL species</td><td>x 1 =</td><td>0</td></tr> <tr><td>FACW species</td><td>x 2 =</td><td>0</td></tr> <tr><td>FAC species</td><td>x 3 =</td><td>0</td></tr> <tr><td>FACU species</td><td>x 4 =</td><td>0</td></tr> <tr><td>UPL species</td><td>x 5 =</td><td>0</td></tr> <tr><td>Column Totals:</td><td>(A)</td><td>0 (B)</td></tr> </tbody> </table> Prevalence Index = B/A = _____	Total % Cover of:	Multiply by:		OBL species	x 1 =	0	FACW species	x 2 =	0	FAC species	x 3 =	0	FACU species	x 4 =	0	UPL species	x 5 =	0	Column Totals:	(A)	0 (B)
Total % Cover of:	Multiply by:																								
OBL species	x 1 =	0																							
FACW species	x 2 =	0																							
FAC species	x 3 =	0																							
FACU species	x 4 =	0																							
UPL species	x 5 =	0																							
Column Totals:	(A)	0 (B)																							
1.																									
2.																									
3.																									
4.																									
Total Cover: _____ %																									
Herb Stratum				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.																					
1.	<u>Cynodon dactylon</u>	<u>75</u>	<u>Y</u> <u>FAC</u>																						
2.	<u>Cirsium vulgare</u>	<u>10</u>	<u>N</u> <u>FACU</u>																						
3.	<u>Festuca arundinacea</u>	<u>10</u>	<u>N</u> <u>FAC-</u>																						
4.																									
5.																									
6.																									
7.																									
Total Cover: <u>95</u> %																									
Woody Vine Stratum				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																					
1.																									
2.																									
Total Cover: <u>95</u> %																									
% Bare Ground in Herb Stratum <u>5</u> % % Cover of Biotic Crust <u>0</u> %																									

Remarks: Veg disturbed by past dredging in adjacent ditch.

SOIL

Sampling Point: 36 B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture ³	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-20	10YR 2/1	100	None			loam loam	

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

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

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):	Hydric Soil Present?
Type: <u>None</u>	Yes <input type="radio"/> No <input checked="" type="radio"/>
Depth (inches): <u>0</u>	

Remarks: soil appears well drained.

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
		<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:		Wetland Hydrology Present?
Surface Water Present?	Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): <u>None</u>	
Water Table Present?	Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): <u>0</u>	
Saturation Present? (includes capillary fringe)	Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): <u>0</u>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
None

Remarks: Located on a bench above drainage ditch. No surface or subsurface hydro indicators observed. Appears well-drained.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Connection Slough City/County: BAZON ISLAND, SAN JOAQUIN Sampling Date: 9/29/08
 Applicant/Owner: CONTRA COSTA WATER DISTRICT State: CA Sampling Point: 37
 Investigator(s): T. Mahoney Section, Township, Range: T2N, R4E, S22
 Landform (hillslope, terrace, etc.): lower slope Local relief (concave, convex, none): convex Slope (%): 5
 Subregion (LRR): C - Mediterranean California Lat: 38° 0' 11" N Long: 121° 31' 44" W Datum: NAD 83
 Soil Map Unit Name: PINDGE MUCK, PART DRAINAGE, 0-270 NWI classification: _____

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.) SEASONAL WETLAND

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Hydic Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: <u>Area has been disked. Veg still present and identifiable.</u>			

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:			
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)			
2. _____				Total Number of Dominant Species Across All Strata: <u>1</u> (B)			
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> % (A/B)			
4. _____							
Sapling/Shrub Stratum				Prevalence Index worksheet:			
1. _____				Total % Cover of:		Multiply by:	
2. _____				OBL species	x 1 =	0	
3. _____				FACW species	x 2 =	0	
4. _____				FAC species	x 3 =	0	
5. _____				FACU species	x 4 =	0	
Total Cover: _____ %				UPL species	x 5 =	0	
Herb Stratum				Column Totals:	(A)	0	(B)
1. <u>Cynodon dactylon</u>	<u>70</u>	<u>Y</u>	<u>FAC</u>	Prevalence Index = B/A = _____			
2. _____				Hydrophytic Vegetation Indicators:			
3. _____				<input checked="" type="checkbox"/> Dominance Test is >50%			
4. _____				<input type="checkbox"/> Prevalence Index is ≤3.0 ¹			
5. _____				<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)			
6. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)			
7. _____				¹ Indicators of hydric soil and wetland hydrology must be present.			
8. _____				Total Cover: <u>70</u> %			
Woody Vine Stratum				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
1. _____							
2. _____							
Total Cover: <u>70</u> %							
% Bare Ground in Herb Stratum <u>30</u> %				% Cover of Biotic Crust <u>0</u> %			
Remarks:							

SOIL

Sampling Point: 37

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

Depth (inches)	Matrix		Redox Features				Texture ³	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-20	10YR 2/2	99+	10YR 7/6	<1	C	m	silty clay loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils⁴:

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: NoneDepth (inches): 0Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Plowed Soils (C6)
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): None
Water Table Present? Yes ☐ No ☒ Depth (inches): 0
Saturation Present? Yes ☐ No ☒ Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

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

None

Remarks:

No surface or near-surface hydro indicators observed.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Connection Slough City/County: Bacon Island, San Joaquin Sampling Date: 8/28/08
Applicant/Owner: CONTRA COSTA WATER DISTRICT State: CA Sampling Point: 38A
Investigator(s): T. MATHONY Section, Township, Range: T2N, R4E, S22
Landform (hillslope, terrace, etc.): level slope Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): C - Mediterranean California Lat: 38° 0' 12" N Long: 121° 31' 43" W Datum: NAD83
Soil Map Unit Name: ITAND SILTY CLAY LOAM, PARTIALLY DRAINAGE, 0-2 NWI classification: _____

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.) seasonal wet

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: <u>located on edge of Connection Slough channel. No true soil development due to riprap, but considered wetland rather than "other waters" due to dense hydrophytic veg.</u>			

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			

Sapling/Shrub Stratum

1. <u>Schoenoplectus acutus</u>	<u>40</u>	<u>Y</u>	<u>OBL</u>
2. <u>Schoenoplectus californicus</u>	<u>40</u>	<u>Y</u>	<u>OBL</u>
3.			
4.			
5.			
Total Cover: <u>80</u> %			

Herb Stratum

1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover: <u>80</u> %			

Woody Vine Stratum

1.			
2.			
Total Cover: <u>80</u> %			

% Bare Ground in Herb Stratum 20 % % Cover of Biotic Crust 0 %

Remarks: (riprap)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 20 (A)
Total Number of Dominant Species Across All Strata: 20 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 % (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:
☒ Dominance Test is >50%
☒ Prevalence Index is ≤3.0¹
☐ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture ³	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
	SEE REMARKS						

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ Histosol (A1)

☐ Histic Epipedon (A2)

☐ Black Histic (A3)

☐ Hydrogen Sulfide (A4)

☐ Stratified Layers (A5) (LRR C)

☐ 1 cm Muck (A9) (LRR D)

☐ Depleted Below Dark Surface (A11)

☐ Thick Dark Surface (A12)

☐ Sandy Mucky Mineral (S1)

☐ Sandy Gleyed Matrix (S4)

☐ Sandy Redox (S5)

☐ Stripped Matrix (S6)

☐ Loamy Mucky Mineral (F1)

☐ Loamy Gleyed Matrix (F2)

☐ Depleted Matrix (F3)

☐ Redox Dark Surface (F6)

☐ Depleted Dark Surface (F7)

☐ Redox Depressions (F8)

☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:

☐ 1 cm Muck (A9) (LRR C)

☐ 2 cm Muck (A10) (LRR B)

☐ Reduced Vertic (F18)

☐ Red Parent Material (TF2)

☐ Other (Explain in Remarks)

Restrictive Layer (if present):

Type: None

Depth (inches): ↓

Hydric Soil Present?

Yes ☐

No ☒

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Remarks: Substrate is mostly riprap on/adjacent to levee.
Dense Schoenoplectus growing in riprap, no true soil development.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

☒ Surface Water (A1)

☒ High Water Table (A2)

☒ Saturation (A3)

☐ Water Marks (B1) (Nonriverine)

☐ Sediment Deposits (B2) (Nonriverine)

☐ Drift Deposits (B3) (Nonriverine)

☐ Surface Soil Cracks (B6)

☐ Inundation Visible on Aerial Imagery (B7)

☐ Water-Stained Leaves (B9)

☐ Salt Crust (B11)

☐ Biotic Crust (B12)

☐ Aquatic Invertebrates (B13)

☐ Hydrogen Sulfide Odor (C1)

☐ Oxidized Rhizospheres along Living Roots (C3)

☐ Presence of Reduced Iron (C4)

☐ Recent Iron Reduction in Plowed Soils (C6)

☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☒ Water Marks (B1) (Riverine)

☒ Sediment Deposits (B2) (Riverine)

☒ Drift Deposits (B3) (Riverine)

☐ Drainage Patterns (B10)

☐ Dry-Season Water Table (C2)

☐ Thin Muck Surface (C7)

☐ Crayfish Burrows (C8)

☐ Saturation Visible on Aerial Imagery (C9)

☐ Shallow Aquitard (D3)

☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?

Yes ☒

No ☐

Depth (inches): 12

Water Table Present?

Yes ☒

No ☐

Depth (inches): 10

Saturation Present?

Yes ☒

No ☐

Depth (inches): 2

Wetland Hydrology Present?

Yes ☒

No ☐

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

None

Remarks: Located on edge of Connection Slough Channel.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Connection Slough City/County: BAZON ISLAND, SAN JOAQUIN Sampling Date: 7/29/08
 Applicant/Owner: CONTRA COSTA WATER DISTRICT State: CA Sampling Point: 38B
 Investigator(s): T. MATHON Section, Township, Range: T2N, R4E, S22
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): convex Slope (%): 25
 Subregion (LRR): C - Mediterranean California Lat: 38° 0' 12" N Long: 121° 31' 43" W Datum: NAD83
 Soil Map Unit Name: ITAND SILTY CLAY LOAM, PARTIALLY DRAINED, 0-2NW1 classification:

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.) Seasonal wet

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: <u>located on levee. Highly disturbed by rip rap. No wetland parameters met.</u>		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: <u>0</u> %			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover: <u>0</u> %			
Herb Stratum			
1.	<u>Hirschfeldia incana</u>	<u>25</u>	<u>Y</u> <u>UPL</u>
2.	<u>Conyza canadensis</u>	<u>25</u>	<u>Y</u> <u>FAC</u>
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover: <u>50</u> %			
Woody Vine Stratum			
1.			
2.			
Total Cover: <u>50</u> %			
% Bare Ground in Herb Stratum <u>50</u> %	% Cover of Biotic Crust <u>0</u> %		
Remarks: <u>(rip rap)</u>			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 10 (A)

Total Number of Dominant Species Across All Strata: 20 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 % (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	<u>0</u>
FACW species	x 2 =	<u>0</u>
FAC species	x 3 =	<u>150.75</u>
FACU species	x 4 =	<u>0</u>
UPL species	x 5 =	<u>0.125</u>
Column Totals:		<u>50</u> (A) <u>200</u> (B)

Prevalence Index = B/A = 4

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☒ Prevalence Index is ≤3.0¹

☐ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☐ No ☒

SOIL

Sampling Point: 38B

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

Depth (inches)	Matrix		Redox Features				Texture ³	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
No SOIL DEVELOPMENT - BARB MP MAP ON LEVEL								

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

 Type: None
 Depth (inches): 0
Hydric Soil Present? Yes ☐ No ☒

Remarks:

no true soil development, just level rip rap

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Plowed Soils (C6)
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): None
 Water Table Present? Yes ☐ No ☒ Depth (inches): 0
 Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): 0

Wetland Hydrology Present? Yes ☐ No ☒

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

None

Remarks:

No hydro indicators observed. Level is sloped and well-drained.