

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: MANDENVILLE @ CONNORSON SLOUGH City/County: SAN JOAQUIN Sampling Date: 10/6/09  
 Applicant/Owner: SAN LUIS DELTA-MONUMENT WATER AUTH. State: CA Sampling Point: 39a  
 Investigator(s): T. MAHONY Section, Township, Range: T2N, R4E, S22  
 Landform (hillslope, terrace, etc.): DITCH Local relief (concave, convex, none): CONCAVE Slope (%): 1  
 Subregion (LRR): C - Mediterranean California Lat: 38°0'17"N Long: 121°31'41"W Datum: NAD83  
 Soil Map Unit Name: Venice mucky silt loam, partially drained 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 checked="" type="checkbox"/> | No <input type="checkbox"/> | Is the Sampled Area<br>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 PERIODICALLY CROPPED IN DITCH.</u><br><u>Located in man-made drainage ditch w/ 6" ponded water.</u><br><u>Indicators of all three wetland parameters observed.</u> |                                         |                             |                                          |                                         |                             |

## VEGETATION

| Tree Stratum (Use scientific names.)      | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet:                                                                                                   |                             |
|-------------------------------------------|------------------|-------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| 1. <u>T</u>                               |                  |                   |                  | 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.                                        |                  |                   |                  |                                                                                                                             |                             |
| Sapling/Shrub Stratum                     |                  |                   |                  | Prevalence Index worksheet:                                                                                                 |                             |
| 1. <u>Typha angustifolia</u>              | <u>20</u>        | <u>Y</u>          | <u>OBL</u>       | Total % Cover of:                                                                                                           | Multiply by:                |
| 2. <u>Urtica dioica</u>                   | <u>5</u>         | <u>N</u>          | <u>FACW</u>      | OBL species                                                                                                                 | x 1 = 0                     |
| 3. <del>Festuca arvensis</del>            | <del>10</del>    | <del>N</del>      | <del>FAC</del>   | FACW species                                                                                                                | x 2 = 0                     |
| 4. <u>Sorghum halepense</u>               | <u>10</u>        | <u>N</u>          | <u>FACU</u>      | FAC species                                                                                                                 | x 3 = 0                     |
| 5.                                        |                  |                   |                  | FACU species                                                                                                                | x 4 = 0                     |
| Total Cover: <u>35</u> %                  |                  |                   |                  | UPL species                                                                                                                 | x 5 = 0                     |
| Herb Stratum                              |                  |                   |                  | Column Totals:                                                                                                              | (A) 0 (B)                   |
| 1.                                        |                  |                   |                  | Prevalence Index = B/A =                                                                                                    |                             |
| 2.                                        |                  |                   |                  | Hydrophytic Vegetation Indicators:                                                                                          |                             |
| 3.                                        |                  |                   |                  | <input checked="" type="checkbox"/> Dominance Test is >50%                                                                  |                             |
| 4.                                        |                  |                   |                  | Prevalence Index is ≤3.0 <sup>1</sup>                                                                                       |                             |
| 5.                                        |                  |                   |                  | <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) |                             |
| 6.                                        |                  |                   |                  | <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)                                          |                             |
| 7.                                        |                  |                   |                  | <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.                                               |                             |
| 8.                                        |                  |                   |                  | Hydrophytic Vegetation Present?                                                                                             |                             |
| Total Cover: <u>0</u> %                   |                  |                   |                  | Yes <input checked="" type="checkbox"/>                                                                                     | No <input type="checkbox"/> |
| Woody Vine Stratum                        |                  |                   |                  |                                                                                                                             |                             |
| 1.                                        |                  |                   |                  |                                                                                                                             |                             |
| 2.                                        |                  |                   |                  |                                                                                                                             |                             |
| Total Cover: <u>35</u> %                  |                  |                   |                  |                                                                                                                             |                             |
| <u>open water</u>                         |                  |                   |                  |                                                                                                                             |                             |
| % Bare Ground in Herb Stratum <u>50</u> % |                  |                   |                  |                                                                                                                             |                             |
| % Cover of Biotic Crust <u>0</u> %        |                  |                   |                  |                                                                                                                             |                             |

Remarks: Hydrophytic vegetation dominant.

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## HYDROLOGY

US Army Corps of Engineers

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Manderville @ connection slough City/County: San Joaquin Sampling Date: 10/6/09  
 Applicant/Owner: SAN LUIS: DELTA-MENDOTA NATURAL AUTH. State: CA Sampling Point: 396  
 Investigator(s): T. Mahony Section, Township, Range: T2N, R4E, S02 22  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 2  
 Subregion (LRR): C - Mediterranean California Lat: 38° 0' 17" N Long: 121° 31' 41" W Datum: NAD 83  
 Soil Map Unit Name: Venice mucky silt loam, partially drained, 0-2 NWI classification: \_\_\_\_\_

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|                                                                                                                             |                                                                     |                                                                                                              |
|-----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Hydrophytic Vegetation Present?                                                                                             | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area<br>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>* SEASONAL <del>WETLAND</del> HYDROLOGY</u><br><u>sample point located on well-drained terrace above ditch.</u> |                                                                     |                                                                                                              |

## VEGETATION

| Tree Stratum (Use scientific names.)      | Absolute % Cover        | Dominant Species?                  | Indicator Status    | <b>Dominance Test worksheet:</b><br>Number of Dominant Species That Are OBL, FACW, or FAC: <u>01</u> (A)<br>Total Number of Dominant Species Across All Strata: <u>01</u> (B)<br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> % (A/B)                                                                                                                                                                                                                                                                                         |                   |              |  |             |       |   |              |       |   |             |       |   |              |       |   |             |       |   |                |     |       |
|-------------------------------------------|-------------------------|------------------------------------|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------|--|-------------|-------|---|--------------|-------|---|-------------|-------|---|--------------|-------|---|-------------|-------|---|----------------|-----|-------|
| 1.                                        |                         |                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |              |  |             |       |   |              |       |   |             |       |   |              |       |   |             |       |   |                |     |       |
| 2.                                        |                         |                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |              |  |             |       |   |              |       |   |             |       |   |              |       |   |             |       |   |                |     |       |
| 3.                                        |                         |                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |              |  |             |       |   |              |       |   |             |       |   |              |       |   |             |       |   |                |     |       |
| 4.                                        |                         |                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |              |  |             |       |   |              |       |   |             |       |   |              |       |   |             |       |   |                |     |       |
| Sapling/Shrub Stratum                     |                         |                                    |                     | <b>Prevalence Index worksheet:</b><br><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                              |                         |                                    |                     | <b>Hydrophytic Vegetation Indicators:</b><br><input checked="" type="checkbox"/> Dominance Test is >50%<br><input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup><br><input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)                                                                                                                                                      |                   |              |  |             |       |   |              |       |   |             |       |   |              |       |   |             |       |   |                |     |       |
| 1.                                        | <u>Cynodon dactylon</u> | <u>90</u>                          | <u>Y</u> <u>FAC</u> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |              |  |             |       |   |              |       |   |             |       |   |              |       |   |             |       |   |                |     |       |
| 2.                                        |                         |                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |              |  |             |       |   |              |       |   |             |       |   |              |       |   |             |       |   |                |     |       |
| 3.                                        |                         |                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |              |  |             |       |   |              |       |   |             |       |   |              |       |   |             |       |   |                |     |       |
| 4.                                        |                         |                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |              |  |             |       |   |              |       |   |             |       |   |              |       |   |             |       |   |                |     |       |
| Total Cover: <u>90</u> %                  |                         |                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |              |  |             |       |   |              |       |   |             |       |   |              |       |   |             |       |   |                |     |       |
| Woody Vine Stratum                        |                         |                                    |                     | <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.<br><br><b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                     |                   |              |  |             |       |   |              |       |   |             |       |   |              |       |   |             |       |   |                |     |       |
| 1.                                        |                         |                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |              |  |             |       |   |              |       |   |             |       |   |              |       |   |             |       |   |                |     |       |
| 2.                                        |                         |                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |              |  |             |       |   |              |       |   |             |       |   |              |       |   |             |       |   |                |     |       |
| 3.                                        |                         |                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |              |  |             |       |   |              |       |   |             |       |   |              |       |   |             |       |   |                |     |       |
| 4.                                        |                         |                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |              |  |             |       |   |              |       |   |             |       |   |              |       |   |             |       |   |                |     |       |
| Total Cover: _____ %                      |                         |                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |              |  |             |       |   |              |       |   |             |       |   |              |       |   |             |       |   |                |     |       |
| % Bare Ground in Herb Stratum <u>10</u> % |                         | % Cover of Biotic Crust <u>0</u> % |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |              |  |             |       |   |              |       |   |             |       |   |              |       |   |             |       |   |                |     |       |

Remarks:

Sampling Point:

396

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

[illegible]

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

<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

Indicators for Problematic Hydric Soils:<sup>4</sup>

- |                                                                  |                                                     |                                                           |
|------------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------------|
| <input type="checkbox"/> Histosol (A1)                           | <input type="checkbox"/> Sandy Redox (S5)           | <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )  |
| <input type="checkbox"/> Histic Epipedon (A2)                    | <input type="checkbox"/> Stripped Matrix (S6)       | <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</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) ( <b>LRR C</b> ) | <input type="checkbox"/> Depleted Matrix (F3)       | <input type="checkbox"/> Other (Explain in Remarks)       |
| <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )         | <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)                |                                                     |                                                           |

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

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Restrictive Layer (if present):

Type: none

Depth (inches): none

Hydric Soil Present? Yes ☐ No ☒

Remarks:

No hydric soil 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) ( <b>Nonriverine</b> )       | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    |
| <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )    | <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): None

Water Table Present? Yes ☐ No ☒ Depth (inches): 1

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

Wetland Hydrology Present? Yes ☐ No ☒

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

None

Remarks:

Soil appears well-drained, w/ no indicators of ponding or saturation.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Mandeville @ connection slough City/County: SAN JOAQUIN Sampling Date: 10/6/09  
 Applicant/Owner: SAN LUIS DUTTA-MENDOTA WATER AUTH. State: CA Sampling Point: 40a  
 Investigator(s): T. Mahoney Section, Township, Range: T2N, R4E, S6Z 22  
 Landform (hillslope, terrace, etc.): ditch Local relief (concave, convex, none): concave Slope (%): 1  
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## 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<br>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 ponded man-made drainage ditch. All three wetland parameters met.</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>03</u> (A)             |
| 2. _____                                  | _____            | _____             | _____            | Total Number of Dominant Species Across All Strata:                                                                         | <u>03</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. <u>Typha angustifolia</u>              | <u>30</u>        | <u>Y</u>          | <u>OBL</u>       | Total % Cover of:                                                                                                           | Multiply by:              |
| 2. <u>Polygonum hydropiperoides</u>       | <u>30</u>        | <u>Y</u>          | <u>OBL</u>       | OBL species                                                                                                                 | x 1 = <u>0</u>            |
| 3. <u>Ambrosia discolor</u>               | <u>20</u>        | <u>Y</u>          | <u>FACW</u>      | FACW species                                                                                                                | x 2 = <u>0</u>            |
| 4. <u>Festuca arundinacea</u>             | <u>10</u>        | <u>N</u>          | <u>UPL</u>       | FAC species                                                                                                                 | x 3 = <u>0</u>            |
| 5. <u>Sorghum halepense</u>               | <u>10</u>        | <u>N</u>          | <u>FACU</u>      | FACU species                                                                                                                | x 4 = <u>0</u>            |
| Total Cover: <u>90</u> %                  |                  |                   |                  | UPL species                                                                                                                 | x 5 = <u>0</u>            |
| Herb Stratum                              |                  |                   |                  | Column Totals:                                                                                                              | (A) <u>0</u> (B) <u>0</u> |
| 1. _____                                  | _____            | _____             | _____            | 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 <sup>1</sup>                                                              |                           |
| 5. _____                                  | _____            | _____             | _____            | <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) |                           |
| 6. _____                                  | _____            | _____             | _____            | <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)                                          |                           |
| 7. _____                                  | _____            | _____             | _____            | <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.                                               |                           |
| 8. _____                                  | _____            | _____             | _____            | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>                         |                           |
| Woody Vine Stratum                        |                  |                   |                  |                                                                                                                             |                           |
| 1. _____                                  | _____            | _____             | _____            |                                                                                                                             |                           |
| 2. _____                                  | _____            | _____             | _____            |                                                                                                                             |                           |
| Total Cover: _____ %                      |                  |                   |                  |                                                                                                                             |                           |
| open water                                |                  |                   |                  |                                                                                                                             |                           |
| % Bare Ground in Herb Stratum <u>10</u> % |                  |                   |                  |                                                                                                                             |                           |
| % Cover of Biotic Crust _____ %           |                  |                   |                  |                                                                                                                             |                           |

Remarks: Sample point dominated by hydrophytic veg.

## SOIL

Sampling Point: 40a

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) |                      |     |                              |   |                   |                  |                      |         |
|---------------------------------------------------------------------------------------------------------------------|----------------------|-----|------------------------------|---|-------------------|------------------|----------------------|---------|
| Depth (inches)                                                                                                      | Matrix Color (moist) | %   | Redox Features Color (moist) | % | Type <sup>1</sup> | Loc <sup>2</sup> | Texture <sup>3</sup> | Remarks |
| 0-20                                                                                                                | 10YR2/1              | 100 | none                         |   |                   |                  | loam/muck            |         |
|                                                                                                                     |                      |     |                              |   |                   |                  |                      |         |
|                                                                                                                     |                      |     |                              |   |                   |                  |                      |         |
|                                                                                                                     |                      |     |                              |   |                   |                  |                      |         |
|                                                                                                                     |                      |     |                              |   |                   |                  |                      |         |
|                                                                                                                     |                      |     |                              |   |                   |                  |                      |         |
|                                                                                                                     |                      |     |                              |   |                   |                  |                      |         |
|                                                                                                                     |                      |     |                              |   |                   |                  |                      |         |
|                                                                                                                     |                      |     |                              |   |                   |                  |                      |         |
|                                                                                                                     |                      |     |                              |   |                   |                  |                      |         |

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

| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) |                                                     | Indicators for Problematic Hydric Soils <sup>4</sup> : |
|---------------------------------------------------------------------------|-----------------------------------------------------|--------------------------------------------------------|
| <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 checked="" 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)                         |                                                     |                                                        |

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

| Restrictive Layer (if present): | Hydric Soil Present?                                                |
|---------------------------------|---------------------------------------------------------------------|
| Type: <u>none</u>               | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Depth (inches): <u>none</u>     |                                                                     |

Remarks: Hydric soil indicators observed.

## 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 checked="" 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 checked="" 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:                             |                                                                                               | Wetland Hydrology Present?                                          |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| Surface Water Present?                          | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>6"</u> | 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:

none

Remarks: Located in a man-made drainage ditch.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Mandeville @ connection slough City/County: San Joaquin Sampling Date: 10/6/09  
 Applicant/Owner: SAN LUIS DELTA-MENDOTA WATER AUTH. State: CA Sampling Point: 406  
 Investigator(s): T. Mahony Section, Township, Range: T2N, R4E, S02 22  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 1  
 Subregion (LRR): C - Mediterranean California Lat: 38° 0' 15" N Long: 121° 31' 29" W Datum: NAD 83  
 Soil Map Unit Name: Venice mucky silt loam, partially drained, 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 checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area<br>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>* seasonal hydrology located on well drained terrace / dirt road above ditch.</u> |                                                                     |                                                                                                              |

## VEGETATION

| Tree Stratum (Use scientific names.)                                           | Absolute % Cover | Dominant Species? | Indicator Status | <b>Dominance Test worksheet:</b><br>Number of Dominant Species That Are OBL, FACW, or FAC: <u>0 / 1</u> (A)<br>Total Number of Dominant Species Across All Strata: <u>0 / 1</u> (B)<br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> % (A/B)                                                                                                                                                                                                                         |                   |              |             |         |              |         |             |         |              |         |             |         |                |           |
|--------------------------------------------------------------------------------|------------------|-------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------|-------------|---------|--------------|---------|-------------|---------|--------------|---------|-------------|---------|----------------|-----------|
| 1.                                                                             |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |              |             |         |              |         |             |         |              |         |             |         |                |           |
| 2.                                                                             |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |              |             |         |              |         |             |         |              |         |             |         |                |           |
| 3.                                                                             |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |              |             |         |              |         |             |         |              |         |             |         |                |           |
| 4.                                                                             |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |              |             |         |              |         |             |         |              |         |             |         |                |           |
| Sapling/Shrub Stratum                                                          |                  |                   |                  | <b>Prevalence Index worksheet:</b><br><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 = _____ | 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                                                                   |                  |                   |                  | <b>Hydrophytic Vegetation Indicators:</b><br><input checked="" type="checkbox"/> Dominance Test is >50%<br><input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup><br><input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.           |                   |              |             |         |              |         |             |         |              |         |             |         |                |           |
| 1.                                                                             |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |              |             |         |              |         |             |         |              |         |             |         |                |           |
| 2.                                                                             |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |              |             |         |              |         |             |         |              |         |             |         |                |           |
| 3.                                                                             |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |              |             |         |              |         |             |         |              |         |             |         |                |           |
| 4.                                                                             |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |              |             |         |              |         |             |         |              |         |             |         |                |           |
| 5.                                                                             |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |              |             |         |              |         |             |         |              |         |             |         |                |           |
| 6.                                                                             |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |              |             |         |              |         |             |         |              |         |             |         |                |           |
| 7.                                                                             |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |              |             |         |              |         |             |         |              |         |             |         |                |           |
| Total Cover: <u>20</u> %                                                       |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |              |             |         |              |         |             |         |              |         |             |         |                |           |
| Woody Vine Stratum                                                             |                  |                   |                  | <b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                |                   |              |             |         |              |         |             |         |              |         |             |         |                |           |
| Total Cover: _____ %                                                           |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |              |             |         |              |         |             |         |              |         |             |         |                |           |
| % Bare Ground in Herb Stratum <u>80</u> %      % Cover of Biotic Crust _____ % |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |              |             |         |              |         |             |         |              |         |             |         |                |           |

Remarks:

## SOIL

Sampling Point: 406

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

| Depth<br>(inches) | Matrix<br>Color (moist) | %   | Redox Features<br>Color (moist) | % | Type <sup>1</sup> | Loc <sup>2</sup> | Texture <sup>3</sup> | Remarks |
|-------------------|-------------------------|-----|---------------------------------|---|-------------------|------------------|----------------------|---------|
| 0-20              | 10YR 2/2                | 100 | none                            |   |                   |                  | loam                 |         |
|                   |                         |     |                                 |   |                   |                  |                      |         |
|                   |                         |     |                                 |   |                   |                  |                      |         |
|                   |                         |     |                                 |   |                   |                  |                      |         |
|                   |                         |     |                                 |   |                   |                  |                      |         |
|                   |                         |     |                                 |   |                   |                  |                      |         |
|                   |                         |     |                                 |   |                   |                  |                      |         |
|                   |                         |     |                                 |   |                   |                  |                      |         |
|                   |                         |     |                                 |   |                   |                  |                      |         |
|                   |                         |     |                                 |   |                   |                  |                      |         |

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

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:<sup>4</sup>

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: noneDepth (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): noneWater 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:

none

Remarks:

Located on well-drained terrace above ditch.  
No wetland hydrology indicators observed.

## WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Mandeville @ connection slough City/County: San Joaquin Sampling Date: 10/6/09  
Applicant/Owner: SAN LUIS 3 DELTA-MENDOTA WATER AUTH. State: CA Sampling Point: 41a  
Investigator(s): T. Mahony Section, Township, Range: T2N, R4E, S22  
Landform (hillslope, terrace, etc.): ditch Local relief (concave, convex, none): concave Slope (%): 1  
Subregion (LRR): C - Mediterranean California Lat: 38° 0' 14" N Long: 121° 31' 28" W Datum: NAD83  
Soil Map Unit Name: Venice mucky silt loam, partially drained, 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 checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area<br>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 drainage ditch, ponded. All three wetland parameters met. Located in a wetland.</u> |                                                                     |                                                                                                              |

## VEGETATION

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

Sapling/Shrub Stratum

|                                     | Absolute % Cover | Dominant Species? | Indicator Status |
|-------------------------------------|------------------|-------------------|------------------|
| 1. <u>Typha angustifolia</u>        | <u>30</u>        | <u>Y</u>          | <u>OBL</u>       |
| 2. <u>Polygonum hydropiperoides</u> | <u>30</u>        | <u>Y</u>          | <u>OBL</u>       |
| 3. <u>Juncus arundinaceus</u>       | <u>20</u>        | <u>Y</u>          | <u>FAC</u>       |
| 4. <u>Sorghum halepense</u>         | <u>30</u>        | <u>Y</u>          | <u>FACU</u>      |
| 5.                                  |                  |                   |                  |
| Total Cover: <u>80</u> %            |                  |                   |                  |

Herb Stratum

|                      | Absolute % Cover | Dominant Species? | Indicator Status |
|----------------------|------------------|-------------------|------------------|
| 1.                   |                  |                   |                  |
| 2.                   |                  |                   |                  |
| 3.                   |                  |                   |                  |
| 4.                   |                  |                   |                  |
| 5.                   |                  |                   |                  |
| 6.                   |                  |                   |                  |
| 7.                   |                  |                   |                  |
| 8.                   |                  |                   |                  |
| Total Cover: _____ % |                  |                   |                  |

Woody Vine Stratum

|                      | Absolute % Cover | Dominant Species? | Indicator Status |
|----------------------|------------------|-------------------|------------------|
| 1.                   |                  |                   |                  |
| 2.                   |                  |                   |                  |
| Total Cover: _____ % |                  |                   |                  |

OPEN WATER  
% Bare Ground in Herb Stratum 20 % % Cover of Biotic Crust \_\_\_\_\_ %

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 032 (A)  
Total Number of Dominant Species Across All Strata: 03 (B)  
Percent of Dominant Species That Are OBL, FACW, or FAC: 66 / 100 % (A/B)

## Prevalence Index worksheet:

| 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)    |

Prevalence Index = B/A =

## Hydrophytic Vegetation Indicators:

- ☒ Dominance Test is >50%  
☒ Prevalence Index is  $\leq 3.0^1$   
☐ Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

Hydrophytic Vegetation Present?

Yes ☒ No ☐

Remarks:

Sample point dominated by hydrophytic veg.

41a

<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

| 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) ( <b>Riverine</b> )               |                                                                                                       |  |
| <input checked="" type="checkbox"/> High Water Table (A2)              | <input type="checkbox"/> Biotic Crust (B12)                            | <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )         |                                                                                                       |  |
| <input checked="" type="checkbox"/> Saturation (A3)                    | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input checked="" type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) |                                                                                                       |  |
| <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )       | <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)         | <input type="checkbox"/> Drainage Patterns (B10)                            |                                                                                                       |  |
| <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Dry-Season Water Table (C2)                        |                                                                                                       |  |
| <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )    | <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)                              |                                                                                                       |  |
| <b>Field Observations:</b>                                             |                                                                        |                                                                             |                                                                                                       |  |
| Surface Water Present?                                                 | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>    | Depth (inches): 4"                                                          |                                                                                                       |  |
| Water Table Present?                                                   | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>    | Depth (inches): 0"                                                          |                                                                                                       |  |
| Saturation Present?<br>(includes capillary fringe)                     | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>    | Depth (inches): 0"                                                          |                                                                                                       |  |
|                                                                        |                                                                        |                                                                             | <b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |  |

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Mandeville @ connection slough City/County: San Joaquin Sampling Date: 10/6/07  
 Applicant/Owner: SAN LUIS DELTA-MENDOTA WATER AUTH. State: CA Sampling Point: 416  
 Investigator(s): T. Mahony Section, Township, Range: T2N, R4E, S22  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 1  
 Subregion (LRR): C - Mediterranean California Lat: 38°0'14"N Long: 121°31'28"W Datum: NAD83  
 Soil Map Unit Name: Venice mucky silt loam, partially drained, 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 checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area<br>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>* seasonal hydrology located on well-drained terrace above ditch.</u> |                                                                     |                                                                                                              |

## VEGETATION

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

## SOIL

Sampling Point: 726

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

| Depth<br>(inches) | Matrix        |   | Redox Features |   |                   |                  | Texture <sup>3</sup> | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|----------------------|---------|
|                   | Color (moist) | % | Color (moist)  | % | Type <sup>1</sup> | Loc <sup>2</sup> |                      |         |
| <u>NONE</u>       |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |

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

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:<sup>4</sup>

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

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

Remarks:

No soils present on rip-rap 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)  
☐ 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): 1  
Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): 60

Wetland Hydrology Present? Yes ☐ No ☒

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

none

Remarks:

Sample point on well-drained rip-rap levee.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Mandeville @ connection slough City/County: San Joaquin Sampling Date: 10/6/09  
 Applicant/Owner: SAN LUIS DATA-MENDOTA WATER AUTH State: CA Sampling Point: 42a  
 Investigator(s): T. Mahony Section, Township, Range: T2N, R4E, S22  
 Landform (hillslope, terrace, etc.): river channel Local relief (concave, convex, none): concave Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: 38° 0' 16" N Long: 121° 31' 42" W Datum: NAD 83  
 Soil Map Unit Name: Venice mucky silt loam, partially drained, 0<sup>2</sup> 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 checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present?                                                                                                    | Yes <input type="radio"/> No <input checked="" type="radio"/> |                                                                                                     |
| Wetland Hydrology Present?                                                                                              | Yes <input checked="" type="radio"/> No <input type="radio"/> |                                                                                                     |
| Remarks: <u>Located at edge of river. Strong wetland hydro but no veg or soils. "OTHER WATERS" rather than WETLAND.</u> |                                                               |                                                                                                     |

## VEGETATION

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

Sampling Point: 42a

[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 checked="" type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )       |     |                                                                                                |  |
| <input checked="" type="checkbox"/> High Water Table (A2)                                                            | <input type="checkbox"/> Biotic Crust (B12)                            | <input checked="" type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) |     |                                                                                                |  |
| <input checked="" type="checkbox"/> Saturation (A3)                                                                  | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input checked="" type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )    |     |                                                                                                |  |
| <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )                                                     | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    | <input type="checkbox"/> Drainage Patterns (B10)                               |     |                                                                                                |  |
| <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )                                               | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Dry-Season Water Table (C2)                           |     |                                                                                                |  |
| <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )                                                  | <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)                                 |     |                                                                                                |  |
| <b>Field Observations:</b>                                                                                           |                                                                        |                                                                                |     |                                                                                                |  |
| Surface Water Present?                                                                                               | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>    | Depth (inches):                                                                | 12" |                                                                                                |  |
| Water Table Present?                                                                                                 | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>    | Depth (inches):                                                                | 0"  |                                                                                                |  |
| Saturation Present?                                                                                                  | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>    | Depth (inches):                                                                | 8"  |                                                                                                |  |
| (includes capillary fringe)                                                                                          |                                                                        |                                                                                |     | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |  |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:           |                                                                        |                                                                                |     |                                                                                                |  |
| None                                                                                                                 |                                                                        |                                                                                |     |                                                                                                |  |
| Remarks: Located at edge of river channel. Ordinary high water mark delineated based on drift deposits, water marks. |                                                                        |                                                                                |     |                                                                                                |  |

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Manderille @ Connection Slough City/County: San Joaquin Sampling Date: 10/6/09  
 Applicant/Owner: SAN LUIS DELTA-MENDOTA WATER AUTH. State: CA Sampling Point: 42b  
 Investigator(s): T. Mahoney Section, Township, Range: T2N, R4E, S2E 22  
 Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): convex Slope (%): 40  
 Subregion (LRR): C - Mediterranean California Lat: 38°0'16"N Long: 121°31'42"W Datum: NAD 83  
 Soil Map Unit Name: Venice mucky silt loam, partially drained, 02 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<br>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>Sample point located on rip-rap levee above OTW. No wetland indicators met.</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.                                   |                  |                           |                  |                                                                                                                             |              |
| 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.                                   |                  |                           |                  | <input checked="" type="checkbox"/> Dominance Test is >50%                                                                  |              |
| 2.                                   |                  |                           |                  | <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>                                                   |              |
| 3.                                   |                  |                           |                  | <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) |              |
| 4.                                   |                  |                           |                  | <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)                                          |              |
| 5.                                   |                  |                           |                  |                                                                                                                             |              |
| 6.                                   |                  |                           |                  |                                                                                                                             |              |
| 7.                                   |                  |                           |                  |                                                                                                                             |              |
| 8.                                   |                  |                           |                  |                                                                                                                             |              |
| Total Cover: %                       |                  |                           |                  | <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.                                               |              |
| Woody Vine Stratum                   |                  |                           |                  | Hydrophytic Vegetation Present?                                                                                             |              |
| 1.                                   |                  |                           |                  | Yes <input type="radio"/> No <input checked="" type="radio"/>                                                               |              |
| 2.                                   |                  |                           |                  |                                                                                                                             |              |
| Total Cover: %                       |                  |                           |                  |                                                                                                                             |              |
| % Bare Ground in Herb Stratum %      |                  | % Cover of Biotic Crust % |                  |                                                                                                                             |              |

Remarks: No vegetation present on rip-rap levee.

## SOIL

Sampling Point: 726

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

| Depth<br>(inches) | Matrix        |   | Redox Features |   |                   |                  | Texture <sup>3</sup> | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|----------------------|---------|
|                   | Color (moist) | % | Color (moist)  | % | Type <sup>1</sup> | Loc <sup>2</sup> |                      |         |
| <u>NONE</u>       |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |

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

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:<sup>4</sup>

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

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

Remarks:

No soils present on rip-rap 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)  
☐ 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): 1  
Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): 60

Wetland Hydrology Present? Yes ☐ No ☒

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

none

Remarks:

Sample point on well-drained rip-rap levee.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Manderville @ connection slough City/County: San Joaquin Sampling Date: 10/6/09  
 Applicant/Owner: SAN LUIS DELTA-MENDOTA WATER AUTH. State: CA Sampling Point: 43a  
 Investigator(s): T. Mahony Section, Township, Range: T2N, R4E, SEC 22  
 Landform (hillslope, terrace, etc.): river channel Local relief (concave, convex, none): concave Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: 38° 0' 12" N Long: 121° 31' 27" W Datum: NAD 83  
 Soil Map Unit Name: Venice mucky silt loam, partially drained, 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 checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area<br>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>located at edge of river channel. densely vegetated, but no true soil development due to riprap. Delineated as wetland rather than "other waters" due to dense veg.</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>0/1</u> (A)            |
| 2. _____                             |                  |                         |                  | Total Number of Dominant Species Across All Strata:                                                                         | <u>0/1</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. <u>Scirpus acutus</u>             | <u>80</u>        | <u>Y</u>                | <u>OBL</u>       | 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: <u>80</u> %             |                  |                         |                  | UPL species                                                                                                                 | x 5 = <u>0</u>            |
| Herb Stratum                         |                  |                         |                  | Column Totals:                                                                                                              | (A) <u>0</u> (B) <u>0</u> |
| 1. _____                             |                  |                         |                  | Prevalence Index = B/A = _____                                                                                              |                           |
| 2. _____                             |                  |                         |                  | Hydrophytic Vegetation Indicators:                                                                                          |                           |
| 3. _____                             |                  |                         |                  | <input checked="" type="checkbox"/> Dominance Test is >50%                                                                  |                           |
| 4. _____                             |                  |                         |                  | <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>                                                   |                           |
| 5. _____                             |                  |                         |                  | <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) |                           |
| 6. _____                             |                  |                         |                  | <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)                                          |                           |
| 7. _____                             |                  |                         |                  | <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.                                               |                           |
| 8. _____                             |                  |                         |                  | Hydrophytic Vegetation Present?                                                                                             |                           |
| Total Cover: _____%                  |                  |                         |                  | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>                                                         |                           |
| Woody Vine Stratum                   |                  |                         |                  |                                                                                                                             |                           |
| 1. _____                             |                  |                         |                  |                                                                                                                             |                           |
| 2. _____                             |                  |                         |                  |                                                                                                                             |                           |
| Total Cover: _____%                  |                  |                         |                  |                                                                                                                             |                           |
| <u>OPEN WATER</u>                    |                  |                         |                  |                                                                                                                             |                           |
| % Bare Ground in Herb Stratum        | <u>20</u> %      | % Cover of Biotic Crust | _____%           |                                                                                                                             |                           |

Remarks: Sample point dominated by hydrophytic vegetation.

## SOIL

Sampling Point: 43~~5~~

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

| Depth<br>(inches) | Matrix        |   | Redox Features |   |                   |                  | Texture <sup>3</sup> | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|----------------------|---------|
|                   | Color (moist) | % | Color (moist)  | % | Type <sup>1</sup> | Loc <sup>2</sup> |                      |         |
| <u>None</u>       |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |

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

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<sup>4</sup>:

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

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

Remarks:

Located on rip-rap levee. No soil development adjacent to

## 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): 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:

Located at edge of river channel.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Manderville @ connection slough City/County: San Joaquin Sampling Date: 10/6/09  
 Applicant/Owner: SAN LUIS : DOTA-MENDOTA WATER AUTH. State: CA Sampling Point: 436  
 Investigator(s): T. Mahoney Section, Township, Range: T2N, R4E, S22  
 Landform (hillslope, terrace, etc.): rip-rap slope Local relief (concave, convex, none): convex Slope (%): 40  
 Subregion (LRR): C - Mediterranean California Lat: 38° 0' 12" W Long: 121° 31' 27" W Datum: NAD 83  
 Soil Map Unit Name: Venice muddy silt loam, partially drained, 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<br>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 disturbed rip-rap levee. No wetland indicators observed.</u> |                                                               |                                                                                                        |

## VEGETATION

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

Remarks: Located on rip-rap levee. No veg present.

## SOIL

Sampling Point: 435

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

| Depth<br>(inches) | Matrix        |   | Redox Features |   |                   | Loc <sup>2</sup> | Texture <sup>3</sup> | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|----------------------|---------|
|                   | Color (moist) | % | Color (moist)  | % | Type <sup>1</sup> |                  |                      |         |
| <u>None</u>       |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |
|                   |               |   |                |   |                   |                  |                      |         |

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

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<sup>4</sup>:

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: noneDepth (inches): ↓Hydric Soil Present? Yes ☐ No ☐

Remarks:

Located on rip-rap levee. No 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): none  
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:

none

Remarks:

Located above Otman

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Mondoville @ Connection Slough City/County: San Joaquin Sampling Date: 10/6/09  
 Applicant/Owner: SAN LUIS: DOTA MONDOTA WATER AUTH. State: CA Sampling Point: 44  
 Investigator(s): T. Mahony Section, Township, Range: T2N, R4E, S0222  
 Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): convex Slope (%): 40  
 Subregion (LRR): C - Mediterranean California Lat: 38° 0' 14" N Long: 121° 31' 31" W Datum: NAD 83  
 Soil Map Unit Name: Venice mucky silt loam, partially drained, v-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

## 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<br>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 on well-drained slope. Only one parameter met. Sample point not located in wetland.</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>100</u> % (A/B)        |
| 4. _____                                  | _____                           | _____             | _____            |                                                                                                                             |                           |
| 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>            |
| Herb Stratum                              |                                 |                   |                  | Column Totals:                                                                                                              | (A) <u>0</u> (B) <u>0</u> |
| 1. <u>Cynodon dactylon</u>                | <u>50</u>                       | <u>Y</u>          | <u>FAC</u>       | Prevalence Index = B/A = _____                                                                                              |                           |
| 2. <u>Convolvulus arvensis</u>            | <u>10</u>                       | <u>N</u>          |                  | Hydrophytic Vegetation Indicators:                                                                                          |                           |
| 3. _____                                  | _____                           | _____             | _____            | <input checked="" type="checkbox"/> Dominance Test is >50%                                                                  |                           |
| 4. _____                                  | _____                           | _____             | _____            | <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>                                                              |                           |
| 5. _____                                  | _____                           | _____             | _____            | <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) |                           |
| 6. _____                                  | _____                           | _____             | _____            | <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)                                          |                           |
| 7. _____                                  | _____                           | _____             | _____            | <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.                                               |                           |
| 8. _____                                  | _____                           | _____             | _____            | Total Cover: <u>60</u> %                                                                                                    |                           |
| 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>40</u> % | % Cover of Biotic Crust _____ % |                   |                  |                                                                                                                             |                           |
| Remarks: _____                            |                                 |                   |                  |                                                                                                                             |                           |

## SOIL

Sampling Point: 44

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

| Depth<br>(inches) | Matrix        |     | Redox Features |   |                   |                  | Texture <sup>3</sup> | Remarks |
|-------------------|---------------|-----|----------------|---|-------------------|------------------|----------------------|---------|
|                   | Color (moist) | %   | Color (moist)  | % | Type <sup>1</sup> | Loc <sup>2</sup> |                      |         |
| 0-20              | 10YR2/2       | 100 | None           |   |                   |                  | Loam                 |         |
|                   |               |     |                |   |                   |                  |                      |         |
|                   |               |     |                |   |                   |                  |                      |         |
|                   |               |     |                |   |                   |                  |                      |         |
|                   |               |     |                |   |                   |                  |                      |         |
|                   |               |     |                |   |                   |                  |                      |         |
|                   |               |     |                |   |                   |                  |                      |         |

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

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)

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: noneDepth (inches): noneHydric 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): noneWater 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:

none

Remarks:

no wetland hydrology indicators observed